UNITED STATES DEPARTMENT OF AGRICULTURE
MISCELLANEOUS PUBLICATION No. 267

WASHINGTON, D. C. ISSUED MARCH 1938

A GRAPHIC SUMMARY OF FARM CROPS

(Based largely on the Census of 1930 and 1935)

By

O. E. BAKER and A. B. GENUNG
Senior Agricultural Economists
Bureau of Agricultural Economics

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This publication is one of a projected series of 10 publications as follows:

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A Graphic Summary of Farm Crops -- O. E. Baker and A. B. Genung
A Graphic Summary of Farm Animals and Animal Products.
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A Graphic Summary of Agricultural Indebtedness.
Norman J. Wall and Ernest J. Engquist, Jr.

This series, which has been prepared under the general direction of O. E. Baker, senior agricultural economist, will bring up to date the Graphic Summary of American Agriculture published in 1931 as Miscellaneous Publication 105.

The first Graphic Summary of American Agriculture appeared in the 1915 Yearbook of Agriculture (also issued as Yearbook Separate 681), and was largely based on the 1910 census. The second was contained in the 1921 Yearbook (also issued as Yearbook Separate 878), and was based largely on the 1920 census. The third was published as Miscellaneous Publication No. 105, in May 1931, and was based both on the 1925 Agricultural Census, and the annual estimates of the Bureau of Agricultural Economics. It was divided into 11 sections, but these sections were bound together and issued only as a single publication. It was more inclusive than previous issues, particularly of maps and graphs relating to the economic and social aspects of agriculture.

The publications in this series devote still more attention to economic and social conditions. They are based on both the 1930 and 1935 census reports, as well as the annual estimates of the Bureau of Agricultural Economics. They deal not only with changes between 1930 and 1935 but also with the changes during the decade of urban prosperity and agricultural depression that preceded the more general depression. Most of the distribution maps for crops and many of those for livestock present the 1929 census returns, because the drought of unprecedented severity and extent in 1934 would make such maps for 1934 misleading. Several increase and decrease maps, however, show the changes that occurred between 1929 and 1934, or 1930 and 1935.

The graphic presentation was designed and drafted under the direction of R. G. Hainsworth, in charge of the graphic section of the Bureau of Agricultural Economics.

Most of the clerical work was done under the supervision of N. P. Bradshaw, who also prepared the indexes.

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By O. E. Baker and A. B. Genung, *senior agricultural economists, Bureau of Agricultural Economics*

FARM CROPS

The agricultural conquest of a virgin continent, mostly within a century, constitutes a pageant which may never occur again in human history. Essentially this conquest consisted of the preparation of the soil for the production of crops. Until less than a century ago, it was a slow-moving procession through one of the largest and densest forests in the world. Then, after a pause of perplexity at the prairie margin, the pioneers brought the grassed half of the United States into use for crops in record time. The progress of settlement was, in general, from the poorer lands of the Atlantic coast to the better lands of the Piedmont and limestone valleys, then to the good forested soils of the Eastern Mississippi Valley, and still later to the excellent soils of the prairies. Instead of advancing onto poorer and poorer land, as the classical economists of England assumed, the movement until 1880 or 1890 was onto better and better land.

These pioneers, however, had to learn about climate and soil and the suitability of the other physical conditions to the various crops. And as the climate varied from year to year, and the soil yielded at first in accordance with its virgin fertility, there is little wonder that mistakes were made in land utilization and crop selection. Out of these trials and errors has emerged an agriculture in which the crops are suited to physical and economic conditions more closely, perhaps, than in other parts of the world. Commercial competition has compelled adjustments to be made far more quickly and accurately than in a more self-sufficing agriculture.

But the adjustments are not complete—never will be so long as civilization remains dynamic. Great shifts in crop production have been made, are being made, and should be made. Many maps in this publication show these shifts in the acreage of the crops during recent years. Other maps show the geographic distribution of each crop, usually in 1929, because the severe drought in 1934 would make maps based on the census data for that year misleading. The maps are designed to be useful to students of geography, history, agronomy, farm organization, land utilization, and agricultural policy.

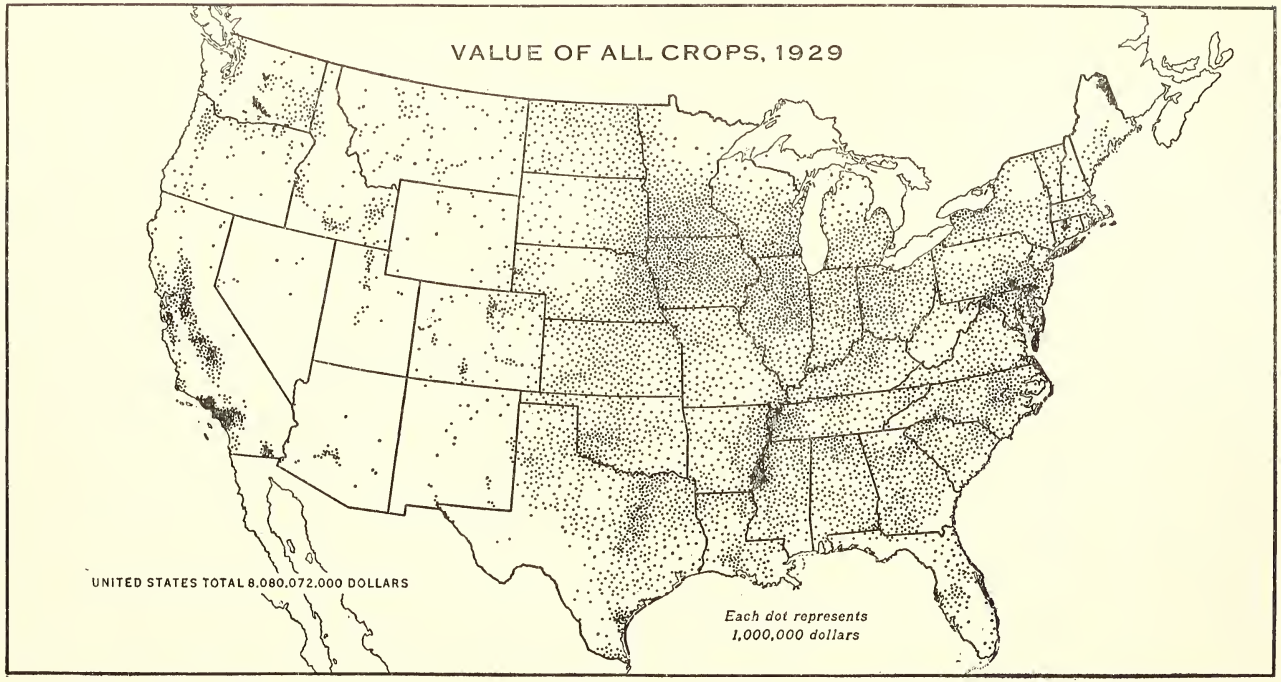

FIGURE 1.—The Cotton Belt and the Corn Belt produced nearly half of the value of all crops in the Nation in 1929. The Corn Belt is the center of the grain-growing region, merging on the south into the generally hilly and less fertile Corn and Winter Wheat Belt, on the north into the Hay and Dairy Belt, on the northwest into the Spring Wheat Belt, and on the Southwest into the Hard Winter Wheat Belt. Concentrations of crop production occur outside these belts, notably the potato districts of Aroostook County, Maine, and coastal Virginia; the fruit, truck, tobacco, and general crop area of southeastern Pennsylvania and adjacent States; and the irrigated valleys of the far West, particularly California.

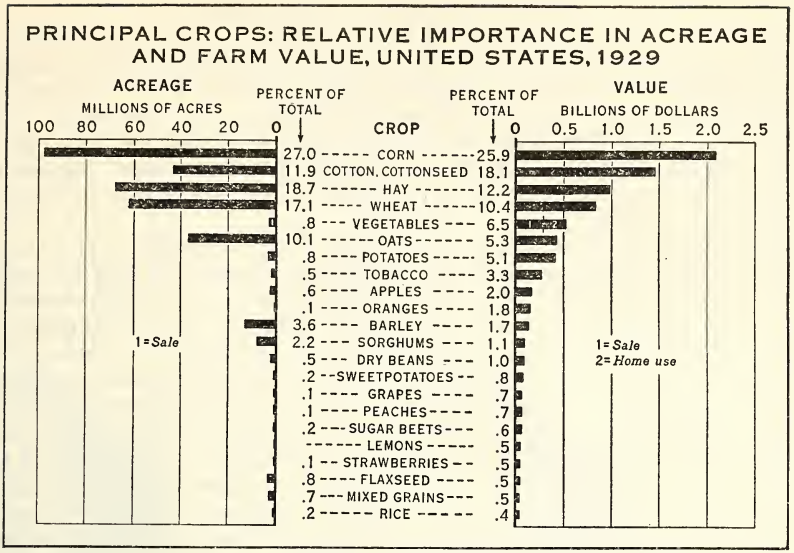

FIGURE 2.—Five crops constituted 72 percent of the value of all crops in 1929, and 85 percent of the acreage. These crops are corn, cotton, hay, wheat, and oats. Of these, three are feed crops—corn, hay, and oats—and two are commonly spoken of as money crops—cotton and wheat. Vegetables are important in sum total but it must be noted that this graph includes those raised for home use as well as for sale. Cotton is the leading money crop of the country and for many years has been its foremost export farm product.

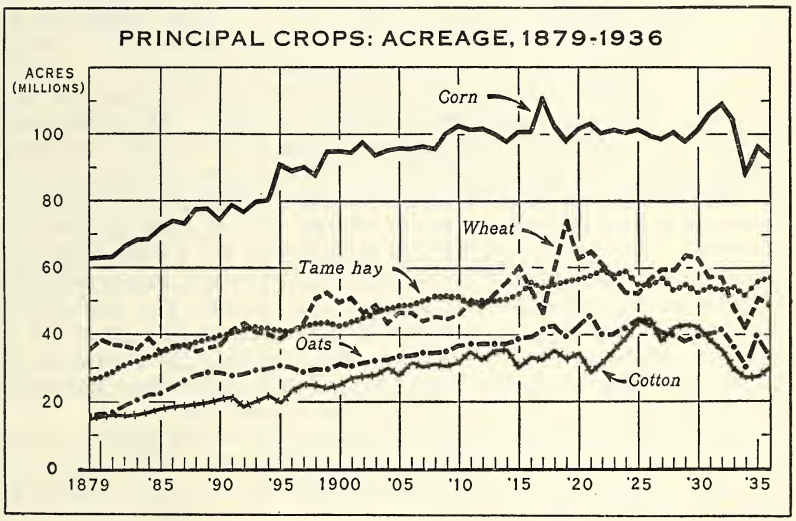

FIGURE 3.—The trends of crop acreage in this country were upward before the World War. Since the war these have been comparatively steady or have tended slightly downward. Population has increased one-fourth since the World War, but the number of horses and mules has decreased a third, and it requires as much land to feed a horse as it does a human being. The acreage of the feed crops—corn, oats, and hay—fluctuates less than that of the cash crops, wheat and cotton. The livestock industry acts as a great balance wheel.

COTTON, TOBACCO, AND FLAX

No other nation in the world has combined within its borders a cotton belt, a corn belt, a hay and dairy belt, a wheat belt, a grazing and irrigated crops belt, a trucking belt, and a fruit belt. Even the entire Continent of Europe does not possess such diversity. This diversity is a source both of strength and of weakness. It results in an agriculturally independent nation interdependent regionally. But it also results in a diversity of interests and sometimes in seeming conflict of interests.

Particularly is this true of the Cotton Belt, which from the standpoint of dependence on foreign markets for disposal of half its major crop, its system of land tenure in the richest areas, its racial elements, its social stratification, and, for many of its people, its standard of living, is different from the other regions of the Nation. Cotton, like most cash crops, appears to favor tenancy or the extensive use of wage labor in agriculture. Associated with the "cropper" system is a credit system that tends to impoverish the debtor and often the creditor too.

Even the climate tends toward impoverishment. The soils of the uplands have been leached for centuries of the lime, potash, and other elements of fertility by the heavy rainfall; and now, with the clearing of the forests and the cultivation of corn and cotton, this heavy rainfall is causing severe erosion of the soil. The crops also tend toward impoverishment. Not only is soil erosion facilitated by these intertilled crops that expose the bare soil to the rains during most of the year, but also this tillage of the soil and the high temperatures promote bacterial decomposition and oxidation of the organic matter, or humus, in the soil, thereby lowering its water-holding capacity and its nitrogen content.

These losses can be repaired by the use of mineral fertilizers and organic manures, particularly by the use of lime, phosphorus, potash, leguminous forage crops, and pasture grasses, with cattle. But fertilizers are expensive, and some crop having a high value per acre, like cotton, is normally required to repay the cost. In certain small areas fruits, particularly early peaches and strawberries are grown; in other small areas early vegetables. These have a high value per acre. But as yet no crop having such high value and a sufficiently extensive market to replace much of the cotton acreage has been discovered. The great agricultural problem of the Cotton Belt is to balance the acreage of the crops that tend toward impoverishment but yield an immediate cash income and permit the purchase of fertilizers, with those that promote conservation of soil resources but involve an immediate cash outlay. This problem of balancing the needs of the present and the future is not confined to the Cotton Belt but the situation is more acute there than elsewhere.

Tobacco, the other great cash crop in parts of the eastern Cotton Belt, and in the Corn and Winter Wheat Belt that adjoins it on the north, is intertilled also, and therefore tends both toward erosion and depletion of soil fertility.

Both cotton and tobacco require large amounts of labor in their cultivation but, as there is relatively little use of power to multiply production per worker, the plane of living is low.

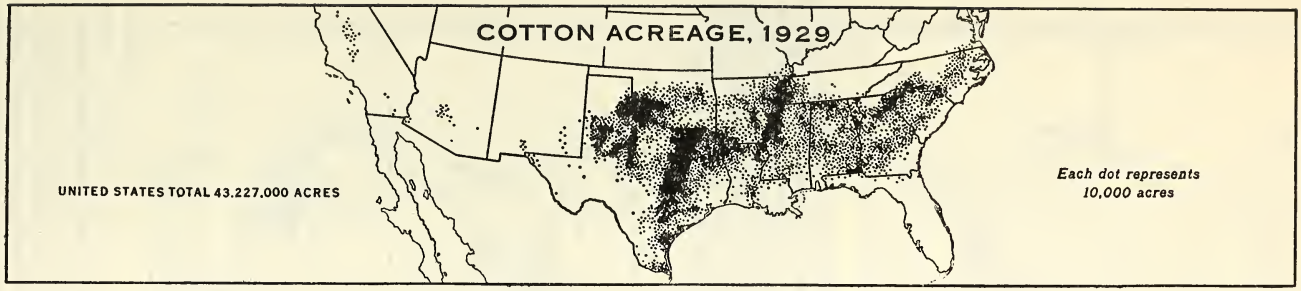

FIGURE 4.—The boundaries of the Cotton Belt correspond closely on the north with the lines of 200 days of frost-free season and 77° F. summer temperature; on the south with that of 11 inches of autumnal rainfall, because wet weather interferes with picking and damages the lint, also increases boll weevil injury. On the west the boundary is approximately 20 inches of average annual rainfall. Further west, in southern New Mexico, Arizona, and California irrigation is necessary. The densest acreages are on the rich soils of the Yazoo delta and the prairies of Texas and Oklahoma.

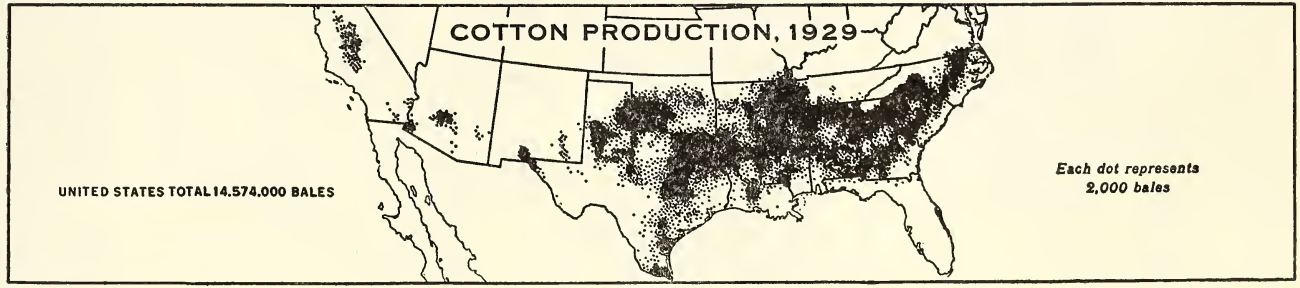

FIGURE 5.—The eastern Cotton Belt has a relatively heavy production of cotton because of the heavily fertilized soils and abundant rainfall.

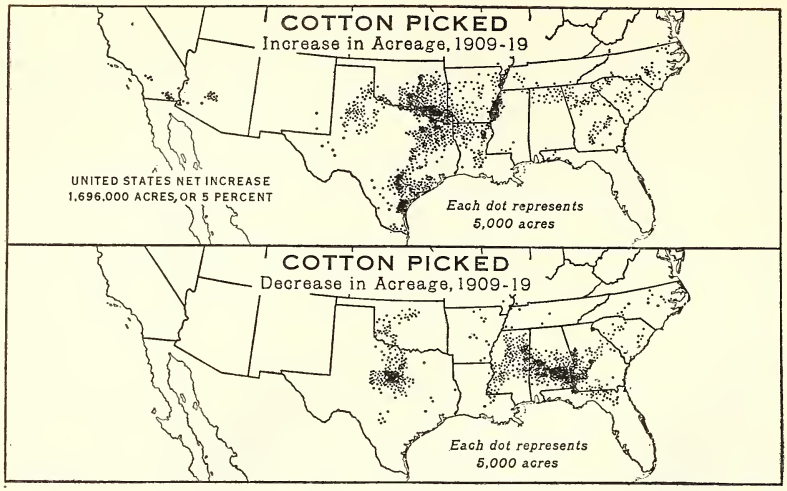

FIGURE 6.—A westward shift of cotton production incident to the advance of the boll-weevil infestation and the development of larger machinery units occurred during the World War decade. Drainage of wet land was in progress in the Yazoo delta and both prairie and former forest lands in Texas and Oklahoma were being planted to cotton. Even cattle ranches on the Staked Plains were subdivided and sold as cotton farms. The eroded, less fertile, or weevil-infested areas of the central Cotton Belt were giving up cotton in favor of territory further west and, to a lesser extent, along the northern border.

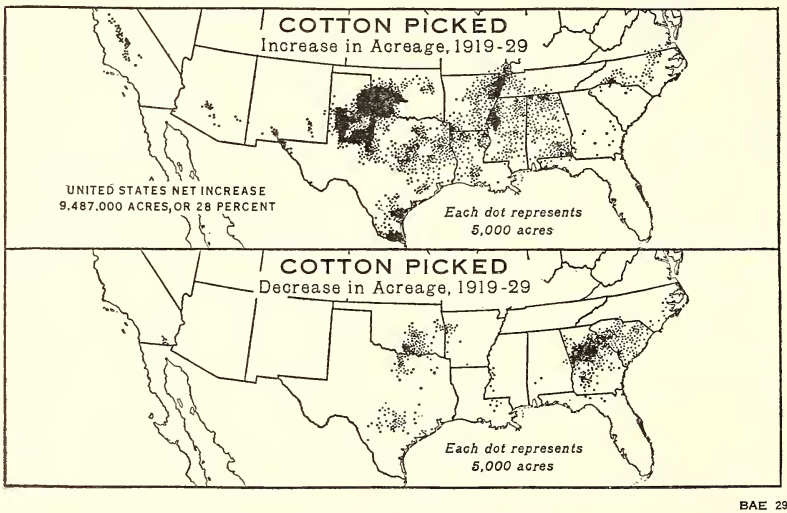

FIGURE 7.—The upper map shows a later stage in the westward expansion of the Cotton Belt, notably into the high plains of western Texas and southwestern Oklahoma. Other districts of notable increase in acreage between 1919 and 1929 were in the Yazoo delta, in northeastern Arkansas, and in southern Texas. The largest decrease in cotton acreage during this decade was in north-central Georgia and South Carolina, where boll-weevil devastations, soil-erosion losses, and other factors induced a decrease of over 50,000 farms. A decline in cotton acreage occurred also in southeastern Oklahoma.

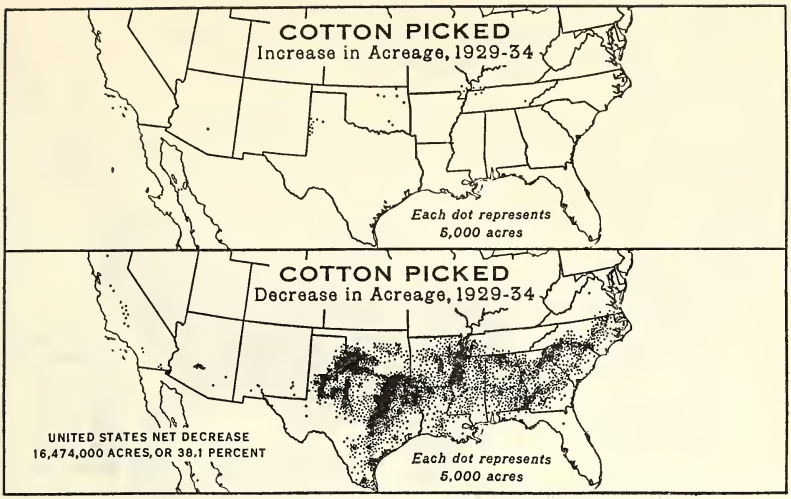

FIGURE 8.—These maps show the striking decrease in cotton acreage picked which resulted from a combination of low prices, drought, and acreage reduction under the program of the Agricultural Adjustment Administration. The acreage picked in 1934 was only about six-tenths of that picked 5 years before. This decrease was almost universal, only a few isolated counties along the northern margin of the Cotton Belt reporting an increased acreage.

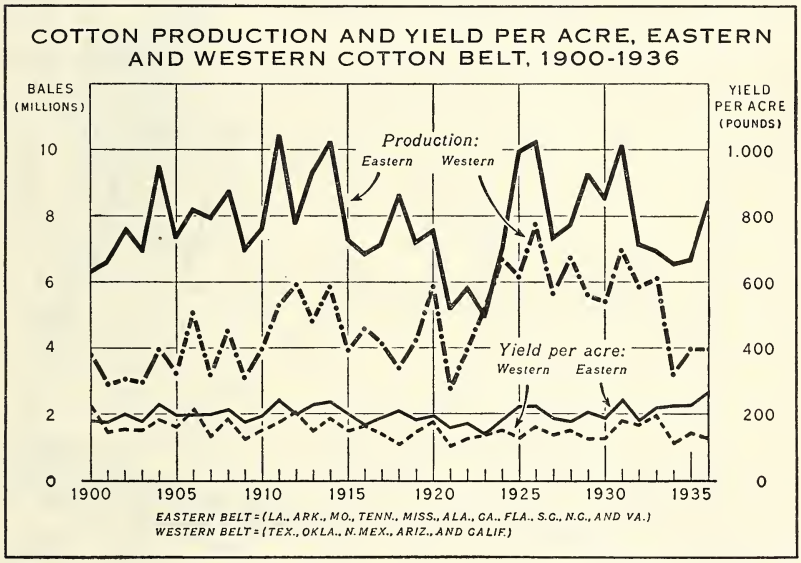

FIGURE 9.—The old South (eastern Cotton Belt) maintained an upward trend in cotton production until about the beginning of the World War. With the spread of the boll weevil it was then downward until 1923. After that production trended upward until the advent of drought and the Agricultural Adjustment Administration program. In the western Cotton Belt the trend of production was upward until 1926. Since then it has fallen off somewhat, notably in the drought year 1934. Average yields per acre are again about as high as 35 years ago.

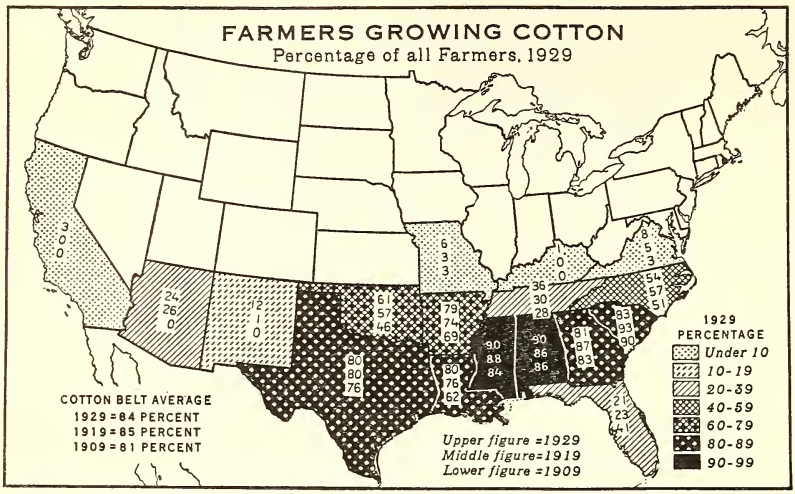

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FIGURE 10.—An increase in the proportion of farmers who grew cotton apparently occurred in the central Cotton Belt between 1909 and 1929. In the northern and western marginal areas the upward trend is clear. In Mississippi and Alabama 90 percent of the farmers were growing cotton in 1929, but about 80 percent in Texas, Louisiana, Arkansas, South Carolina, and Georgia, in which certain special crops are important. Only two-thirds of Oklahoma and North Carolina are climatically suited to cotton; consequently the proportion of the farmers growing cotton was smaller.

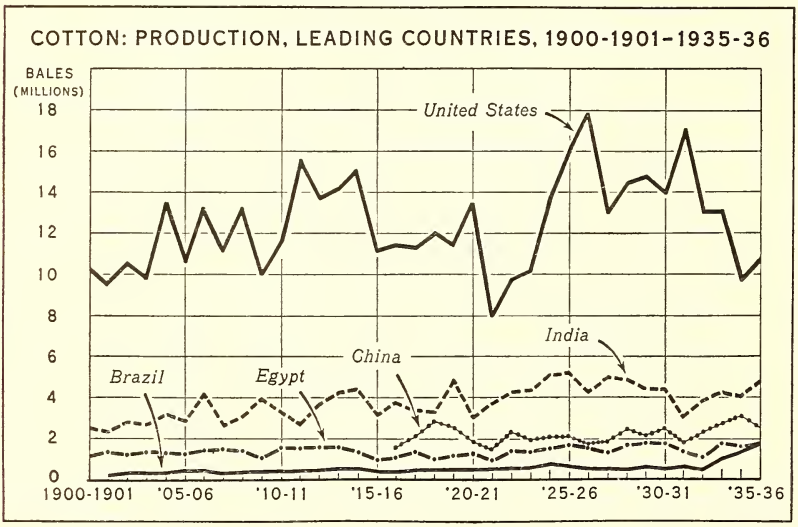

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FIGURE 11.—For more than a century the United States has been the world's leading producer of cotton. The general trend of production was upward until 1926. Since then the trend has been downward, partly owing to low prices, partly to drought, and partly to the Agricultural Adjustment Administration program. Increases have taken place in a number of other countries, notably since 1931–32. India, China, and Brazil have all increased their production markedly since that date. Proportionately the increase has been greatest in Brazil.

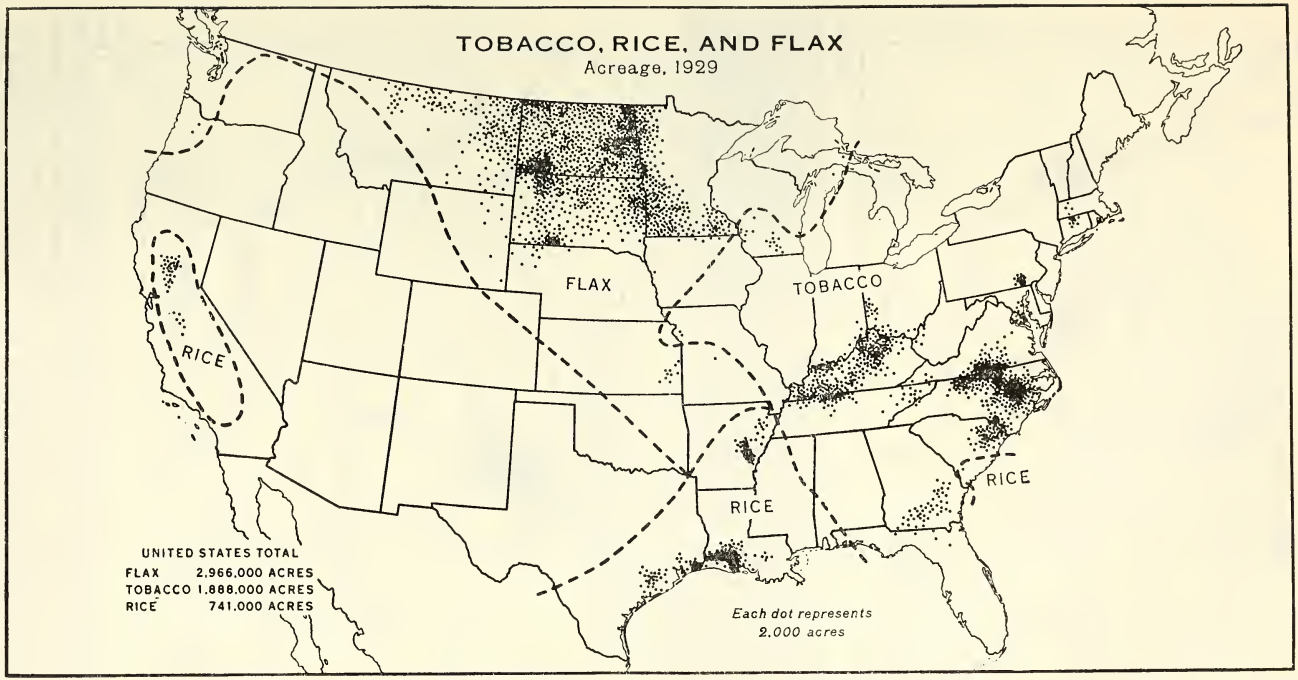

FIGURE 12.—Tobacco, rice, and flax are localized crops. Tobacco is grown mostly in Kentucky and adjacent Tennessee, in Virginia and the Carolinas. But there are also important centers of production in southern Georgia, Maryland, Lancaster County, Pa., the Connecticut Valley, Darke County, Ohio, and southern Wisconsin. Tobacco is sensitive to soil conditions, but the requirements vary with the types. Rice is now practically confined to the coastal prairies of Louisiana and Texas, the prairie and adjacent lowlands of eastern Arkansas, and the valley of the Sacramento in California—all areas of heavy subsoils that hold the irrigation water. Flax is grown mostly in the Spring Wheat Belt, a region of short cool summers, in southeastern Kansas, and recently in the Imperial Valley of California in the winter.

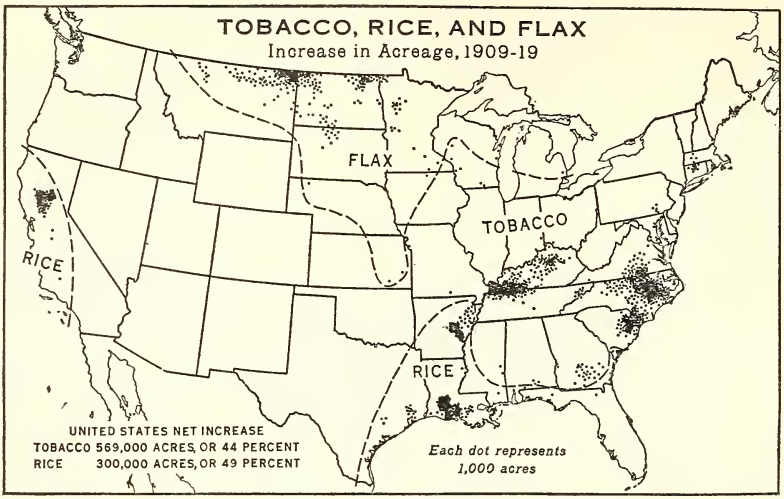

FIGURE 13.—During the World War decade the increase in acreage of tobacco was notable in all the major districts, except Darke County, Ohio, and except that shifts in acreage occurred in Wisconsin. Rice production developed rapidly in the California and Arkansas rice districts and in the principal district in Louisiana. Flax acreage shifted in part northward toward the Canadian boundary, with a notable expansion in the Plentywood-Scobey district of northeastern Montana, and a much greater contraction in most of North Dakota and South Dakota (fig. 14).

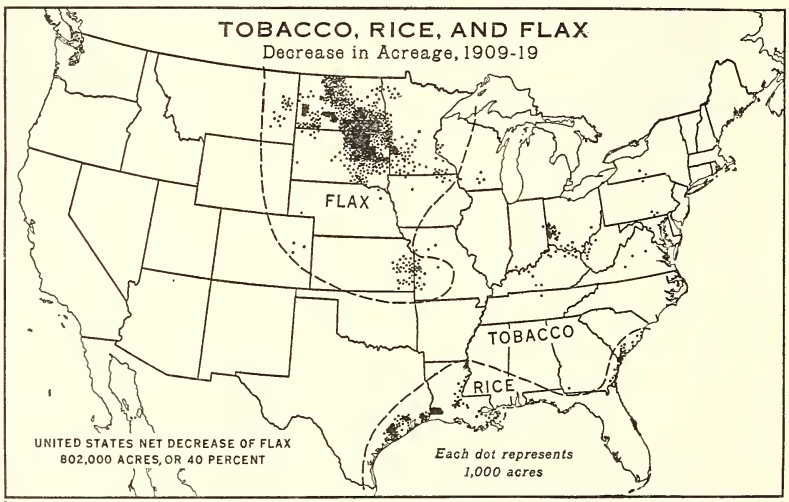

FIGURE 14.—The acreage in flax decreased greatly in the Dakotas between 1909 and 1919, owing to lowering yields per acre and relatively better prices for wheat during the World War. Tobacco acreage decreased to a notable extent only in the district of Darke County, Ohio. Consumption and prices of tobacco were relatively high during the World War. Rice acreage declined on the coast of South Carolina and Georgia, the industry becoming almost extinct, after a century of development. Acreage increased in southwestern Louisiana and the Texas coast, where the large fields permitted the use of modern power machinery.

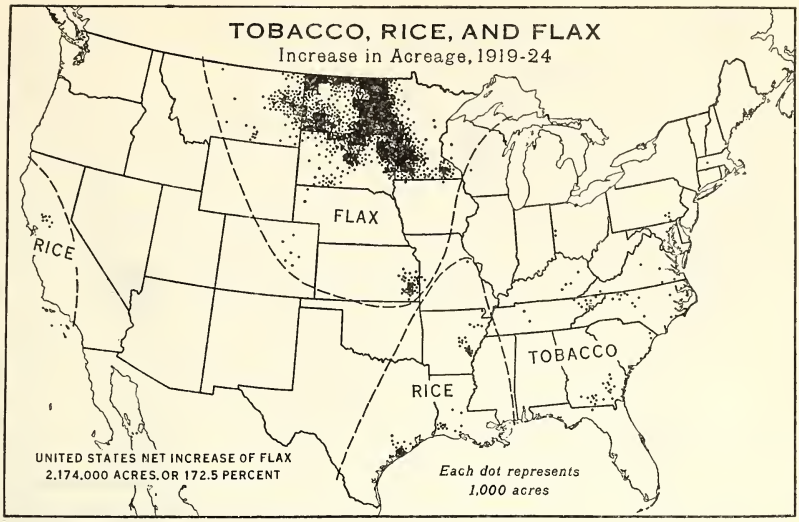

FIGURE 15.—The recovery in acreage of flax by 1924 reflected improvements in acre yields and good prices for 2 years previously. Wartime prices had stimulated the planting of wheat at the expense of flax in the Spring Wheat Belt, and after the slump in wheat prices in 1920 there was a tendency to turn some land back into flax. Tobacco acreage, on the other hand, increased only locally a little, and rice acreage only in a few counties, notably Arkansas and Prairie Counties, Ark.; Calcasieu Parish, La.; Matagorda County, Tex.; and Yolo County, Calif.

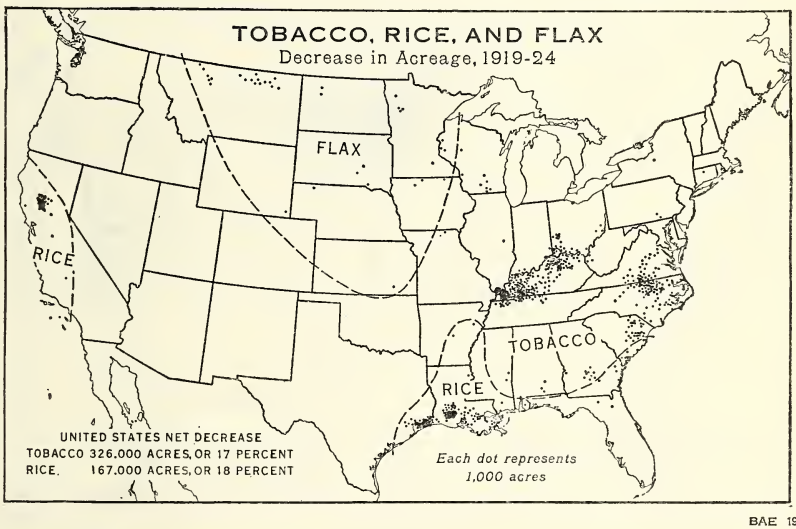

FIGURE 16.—Flax acreage decreased only locally between 1919 and 1924—mostly in Montana. Tobacco acreage in Kentucky and in the Carolinas and Virginia showed a considerable decrease—a reaction to the boom prices of 1917, 1918, and 1919. The net decrease in tobacco acreage amounted to 17 percent for the country as a whole. There was an 18-percent net decrease in the acreage of rice, this occurring about equally in Louisiana, southeast Texas, and California. Only about 6,000 acres of rice were grown in South Carolina and Georgia in 1924.

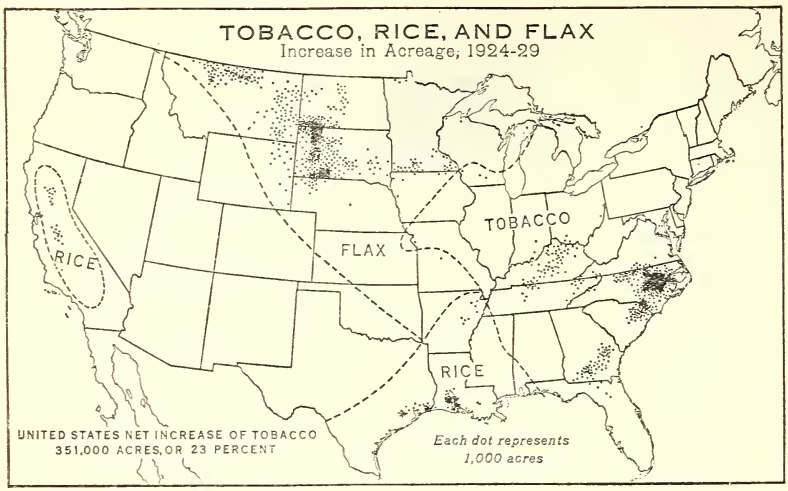

FIGURE 17.—Between 1924 and 1929 the most striking changes were a shift eastward in tobacco acreage and westward in the case of flax. There was a substantial increase in tobacco in eastern North Carolina, in South Carolina, and in Georgia, while in the case of flax the increase was striking in the semi-arid portions of western South Dakota. Flax growing was also moving more extensively into Montana. Rice acreage increased in the eastern coastal prairie of Louisiana, but decreased in the Mississippi Delta, and some shifts in acreage likewise occurred in Texas and in California.

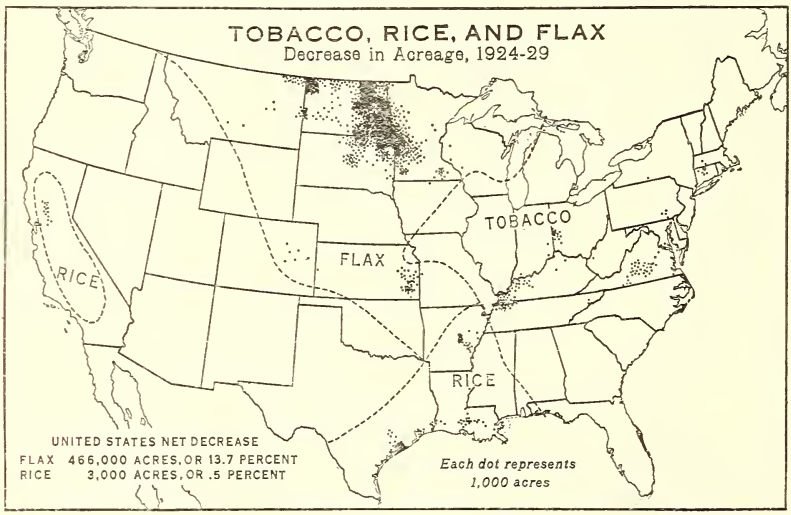

FIGURE 18.—The decrease in acreage of flax in the eastern portion of the Spring Wheat Belt between 1924 and 1929, partly attributable to flax wilt, was much greater than the increase in the western portion. The net decrease in total acreage of flax in the United States was 14 percent between 1924 and 1929. Tobacco acreage decreased in the Connecticut Valley, in Lancaster County, Pa., in central Virginia, in Darke County, Ohio, and in extreme western Kentucky and the adjacent section of Tennessee. Rice acreage decreased in the Arkansas prairie and in Matagorda County, Tex.

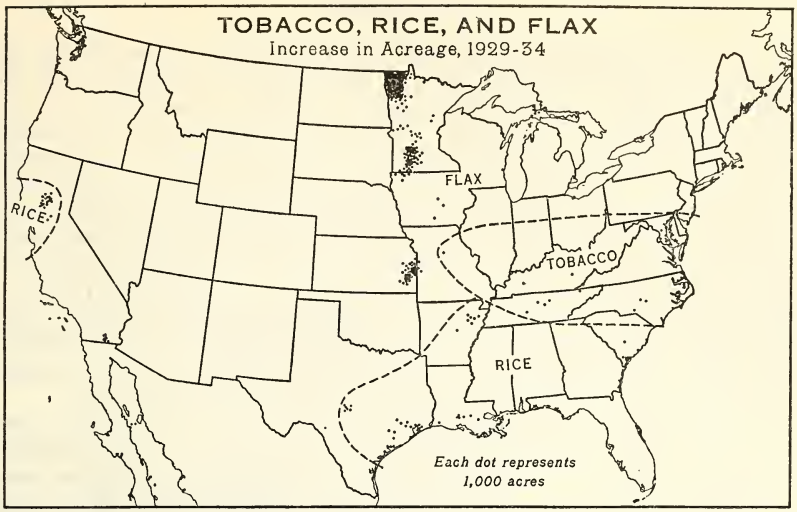

FIGURE 19.—Between 1929 and 1934 there was some increase of flax acreage in southern and northwestern Minnesota, a development arising out of local circumstances, chief among which were the effects of the drought farther west and shifts made in the spring wheat acreage under the Agricultural Adjustment Administration program; also a slight increase occurred in eastern Kansas and in the Imperial Valley in California—the latter a new development. A few local increases occurred in the acreage of tobacco and rice, including a gain of 2,000 acres of rice in South Carolina.

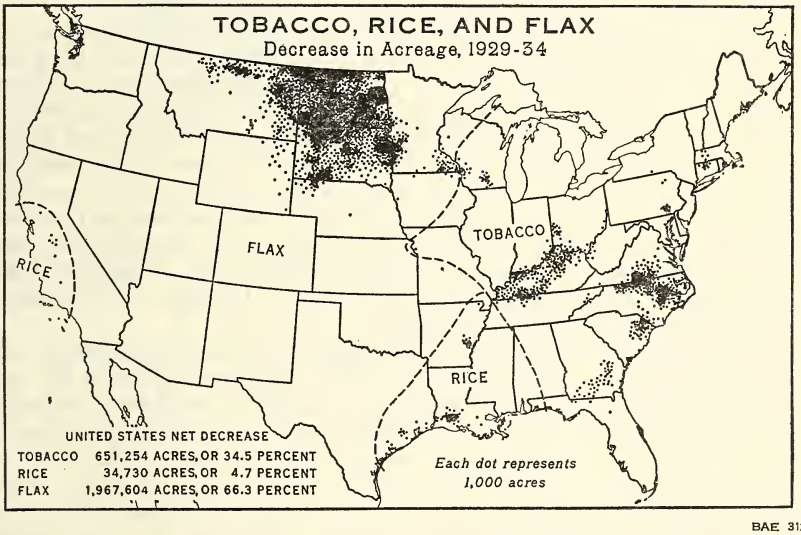

FIGURE 20.—In general, there was a striking decrease between 1929 and 1934 in the acreages harvested of tobacco, rice, and flax. The small acreage of flax in 1934 was due mostly to the drought. The shrinkage in tobacco acreage was due largely to curtailment under the Agricultural Adjustment Administration program, and in the case of rice, almost entirely so. The decrease in these crops in 1934 as compared with that 5 years before amounted to more than two-thirds for flax, one-third for tobacco, but only 5 percent for rice.

THE CEREALS

In the United States, as in most other countries of the world, the cereals constitute the major part of the total crop acreage. Of the 362,000,000 acres of crops harvested in 1929, a normal year, the cereals constituted 56 percent. Directly or indirectly the cereals provide most of the food for the people. Of the cereal crops produced in the 5 years, 1922–26, about 17 percent, measured in pounds, was used for human food, 62 percent to feed livestock (including the bran, middlings, and other offal), 9 percent was exported, and 12 percent is accounted for by other uses, spoilage, and accumulation of stocks.

Five agricultural regions are named after a dominant cereal or cereals—the Corn Belt, the Corn and Winter Wheat Belt, the Hard Winter Wheat Belt, the Spring Wheat Belt, and the Columbia Plateau Wheat Belt. These five belts include half the agricultural production of the Nation, but their productivity is being slowly impaired.

A serious agronomic problem in the Corn Belt is the loss of soil resources locally by erosion and nearly everywhere by the depletion of the organic matter, or humus, and of the phosphorus in the soil. Only a little fertilizer is used as yet in the Corn Belt, but much more could be used to advantage under conditions of normal prices for farm products. A serious economic and social problem is the loss of land ownership by farmers. In Illinois, Iowa, and South Dakota, the equity of farm operators in farm real estate was less than 30 percent of its total value in 1930. That is, the value of real estate operated by tenants and the mortgage debt on farms operated by owners totaled more than 70 percent of the value of all farm real estate. This loss of land ownership by farm operators has been persistent and progressive since 1880.

In the Corn and Winter Wheat Belt there is the same problem of depletion of soil resources, but the loss of land ownership has been less rapid than in the Corn Belt and in many localities there has been little change for 50 years in the equity of farm operators in farm real estate. The land, in general, is less productive and less valuable than in the Corn Belt, the agriculture is less commercial in most parts and the tradition of the farm as a home and a heritage has apparently retained greater strength. The urgent economic and social problem in the Corn and Winter Wheat Belt, particularly in the poorer Appalachian and Ozark portions, is the pressure of population on the meager natural resources, and the consequent low levels of rural living and education, as compared with those in the North.

The subhumid to semiarid wheat belts also have agronomic and economic problems. The depletion of the organic matter in the soil in these regions is more serious even than in the humid regions to the east, for its restoration is more difficult and the resultant change in the texture of the soil permits severe wind erosion. Among the economic problems, probably the most pressing is that of land utilization. Rainfall is irregular and in the drier parts of these belts is too precarious for profitable crop production. Much of the land should be restored to grass, but this means larger farms and a smaller population.

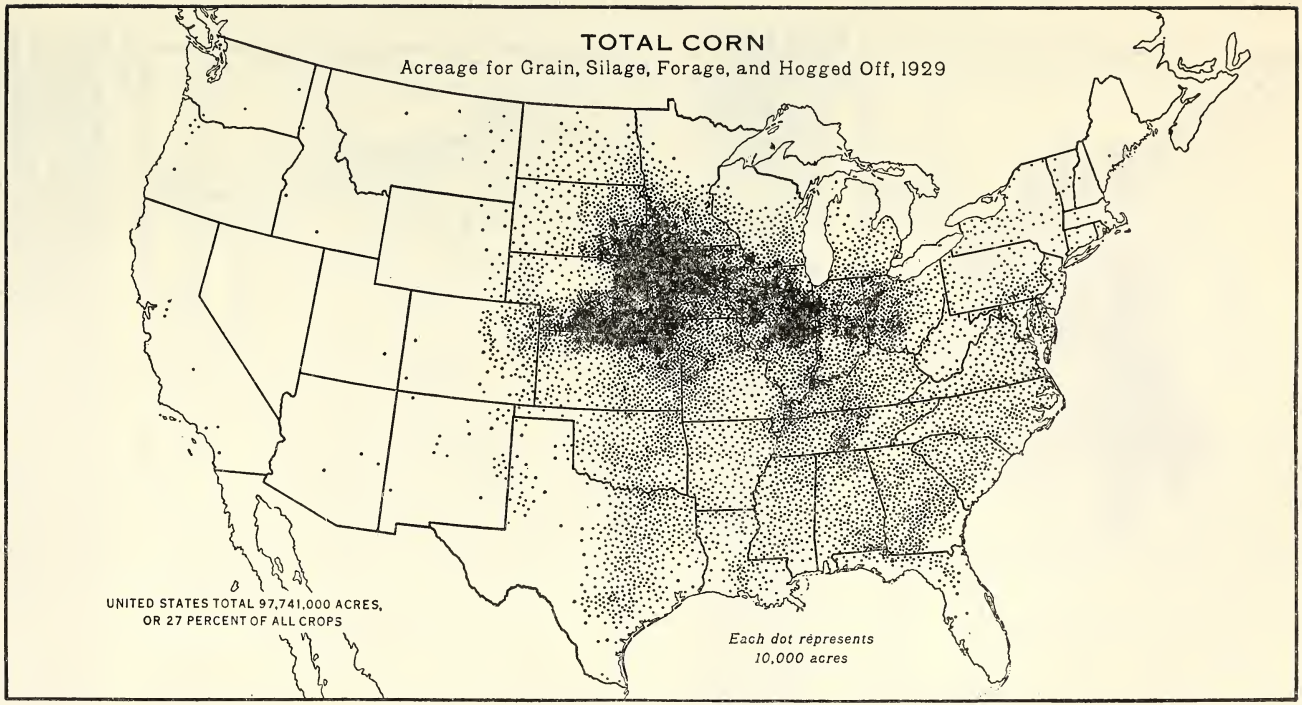

FIGURE 21.—About 60 percent of the world's corn crop is grown in the United States, nearly all east of the line of 8 inches summer rainfall and south of the line of 66° F. summer temperature. In the Corn Belt, the area shown as nearly black on the map, production exceeds 3,000 bushels per square mile and in some counties rises to 5,000 bushels. This is mostly a glaciated region, much of which is characterized by prairie soil, derived principally from calcareous glacial drift and high in humus and nitrogen. The land is level to rolling, nearly all arable, and adapted to the use of modern machinery. In addition, the winters are dry and cold, retarding soil leaching, and the summers are wet and warm, promoting rapid plant growth.

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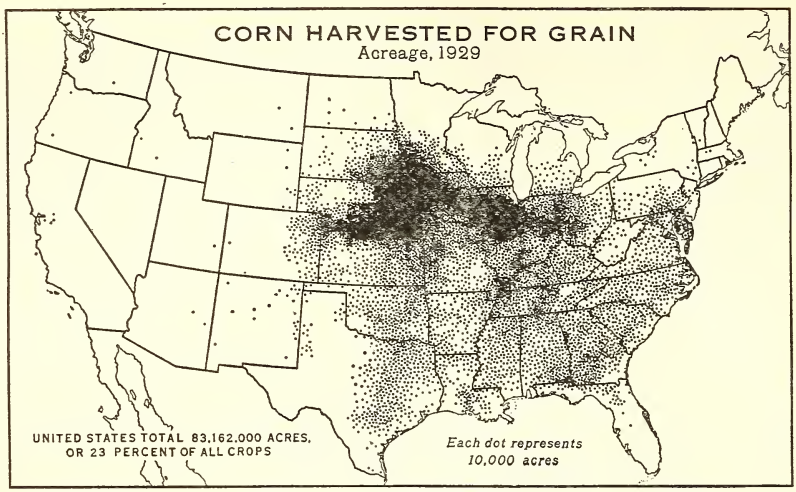

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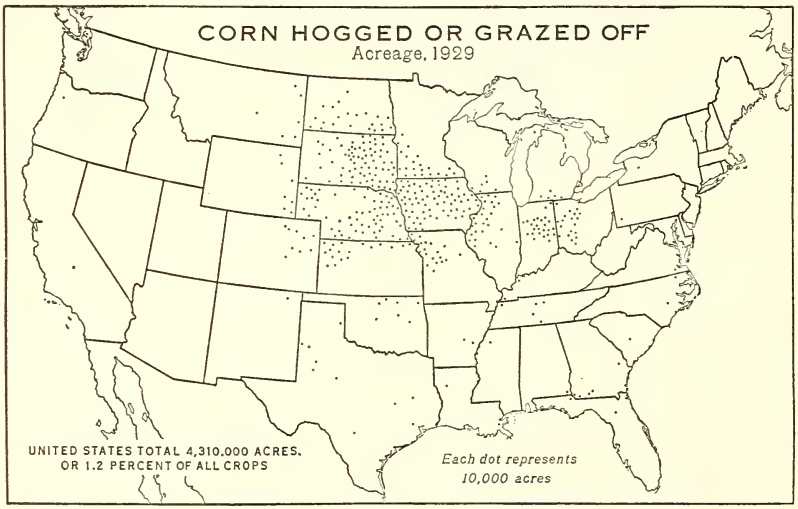
FIGURE 22.—About 85 percent of the corn crop is harvested for grain, but along the northern margin of production the corn is mostly cut for silage or for fodder. Corn is the great feed grain of the Nation—the raw material upon which the livestock industries are based. Production for grain is concentrated in the Corn Belt, but corn is also the most important grain throughout the South, equaling cotton in acreage in several Cotton Belt States.



BAE 24488

FIGURE 23.—During and following the World War, when labor was scarce and wages were high, there grew up in the Corn Belt and Spring Wheat Belt the practice of harvesting corn by the easy method of turning hogs or other livestock into the fields. In years when corn is relatively cheap, there is a greater tendency to save the cost of harvesting by turning the hogs in, but when corn is bringing a good price in the markets, more of it is husked and the hogging-off practice diminishes.

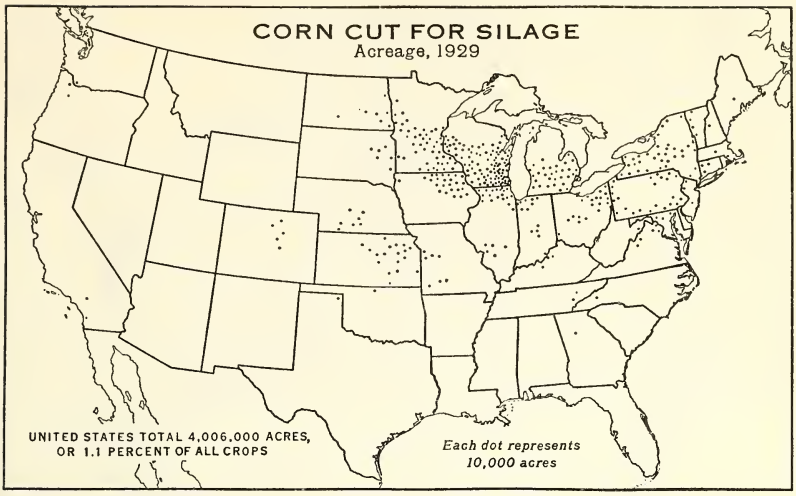


FIGURE 24.—Corn is used for silage principally in providing dairy cows with a succulent feed in winter, high in vitamin content. Consequently the acreage of corn for silage is located mostly in the Dairy Belt, notably in Wisconsin and Minnesota, Michigan, and New York, and along the northern margin of the Corn Belt. Some use also is made of corn silage to feed beef cattle and sheep, notably in Kansas, Nebraska, and Colorado. Corn cut for silage in 1929 constituted a little more than 4 percent of the total corn acreage.

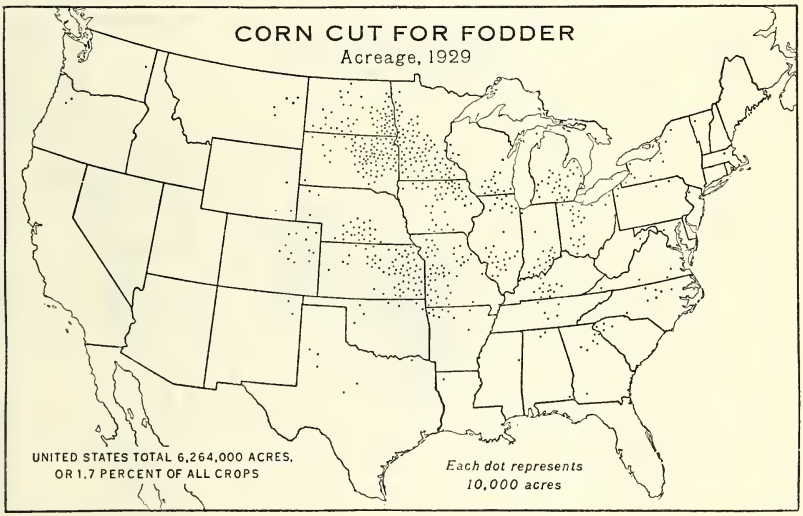


FIGURE 25.—Corn is cut for forage or fodder mostly around the margin of the Corn Belt, especially along the northern margin in the Lakes States and the Dakotas. Here dairying is dominant, or is becoming dominant, and the green corn is fed to dairy cows largely. Elsewhere it is fed mostly to beef cattle, although a little is used to feed sheep and horses. No corn that is also harvested for grain is included in this map. Only 6 percent of the total corn acreage is cut solely for fodder.

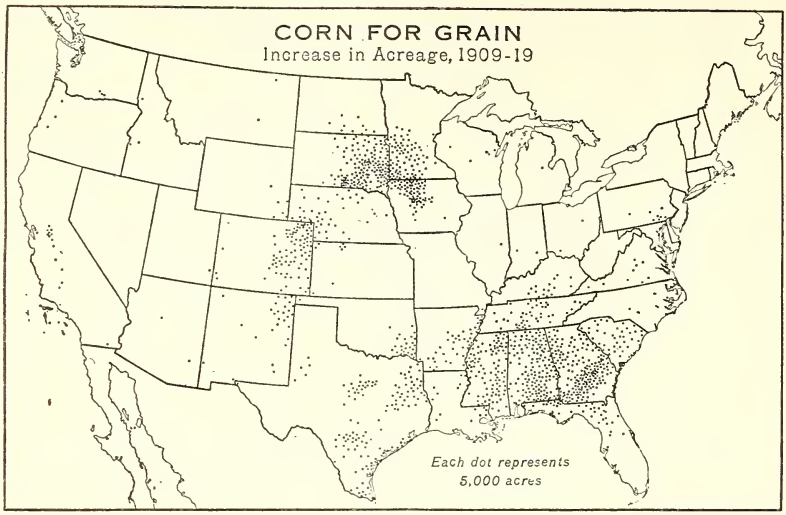


FIGURE 26.—In the 10 years following 1909 the Corn Belt expanded northwestwardly into eastern South Dakota and southern Minnesota. This extension of the Corn Belt had been going on for a generation. Notable increases in corn acreage occurred also in eastern Colorado and western Nebraska where the native sod was being plowed up for grain production. Considerably larger were the increases in the Cotton Belt, associated with widespread efforts to make that region more self-sufficient in feed crops and livestock production.

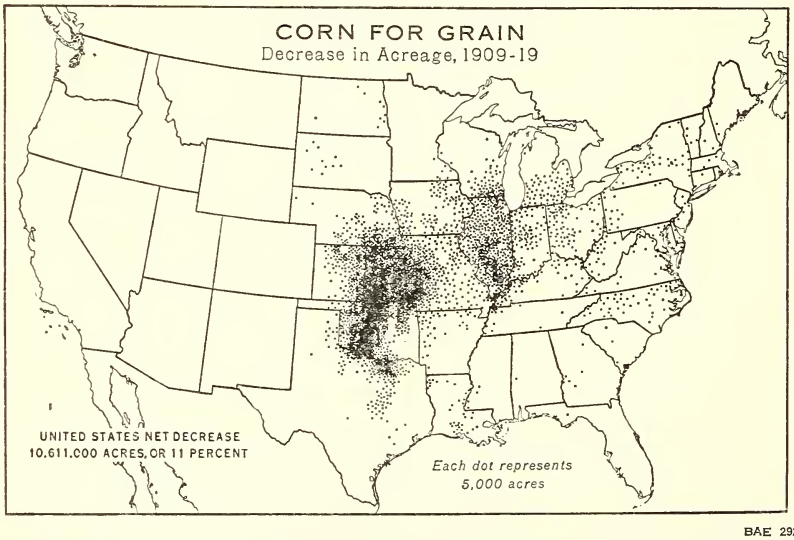


FIGURE 27.—In the period 1909–19 there was an especially striking decrease of corn acreage in most of Oklahoma and Kansas. In part this was due to a bad year in that territory; but in larger part it was a reflection of a wartime tendency to increase the growing of wheat in Kansas and wheat and cotton in Oklahoma. The decrease shown in Illinois and adjacent territory likewise was in part the result of a bad year and in part owing to the replacement of corn by winter wheat and other cash crops.

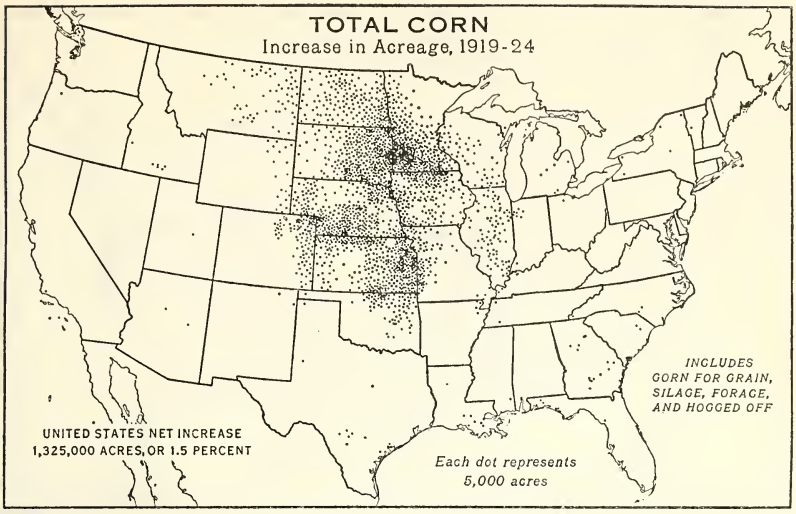


FIGURE 28.—This map shows the westward and northwestward movement of corn acreage into the old wheat territory of a generation ago. The history of agriculture in the prairie and Lakes States has been characterized by the advance of diversified agriculture in the wake of the one-crop wheat system. As the frontier moved westward from New York and Pennsylvania in the early days, the common crop was wheat planted year after year. As the soil fertility became depleted wheat growing gave way to a more diversified type of farming in which corn and hay and livestock played a larger part.

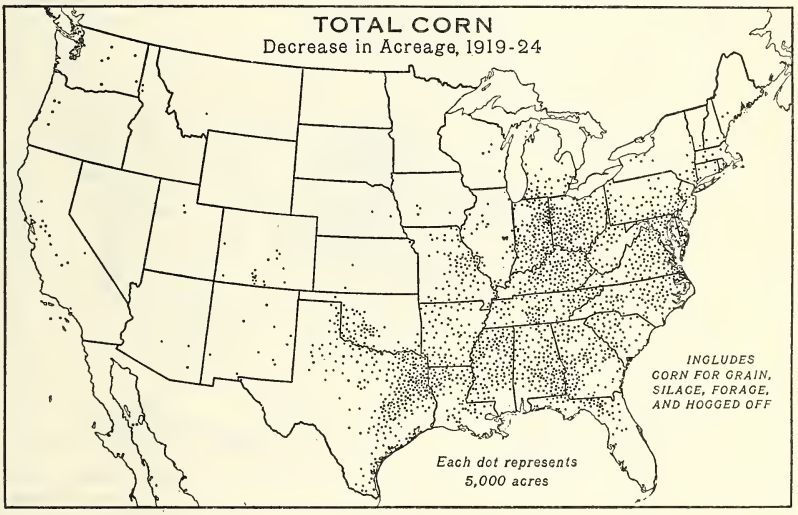
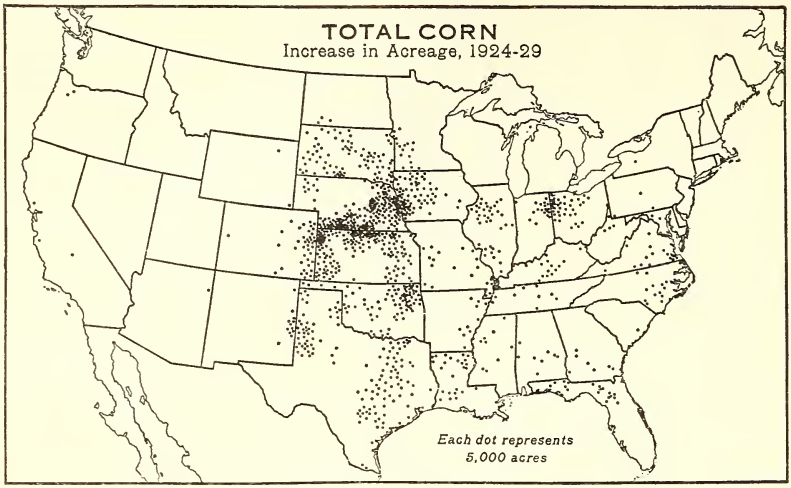
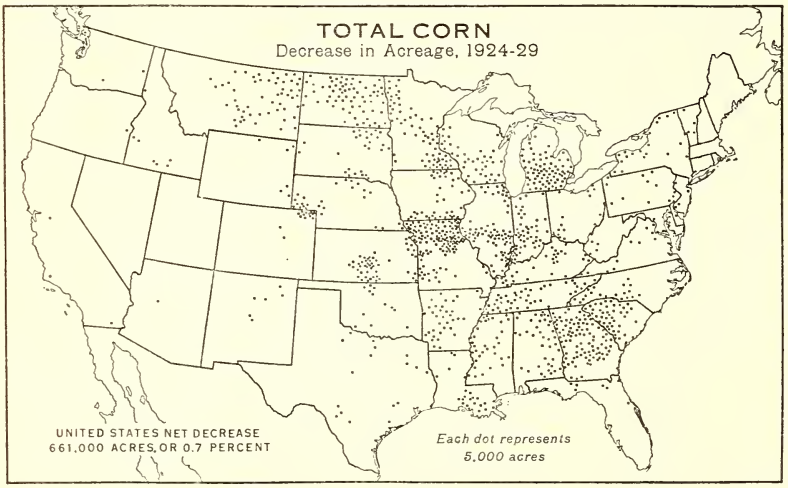


FIGURE 29.—The decrease in corn acreage between 1919 and 1924 was practically confined to the originally forested part, of the United States, where the soils are naturally poorer than in the prairie part, and was greatest, proportionally, in the Southern States, where cotton acreage was expanding, as in Texas, or farming was contracting, as in Georgia. In the Indiana and Ohio portion of the Corn Belt the decline in corn acreage was only a part of the shift from crops to pasture, resulting chiefly from the high wages obtainable in the nearby cities.



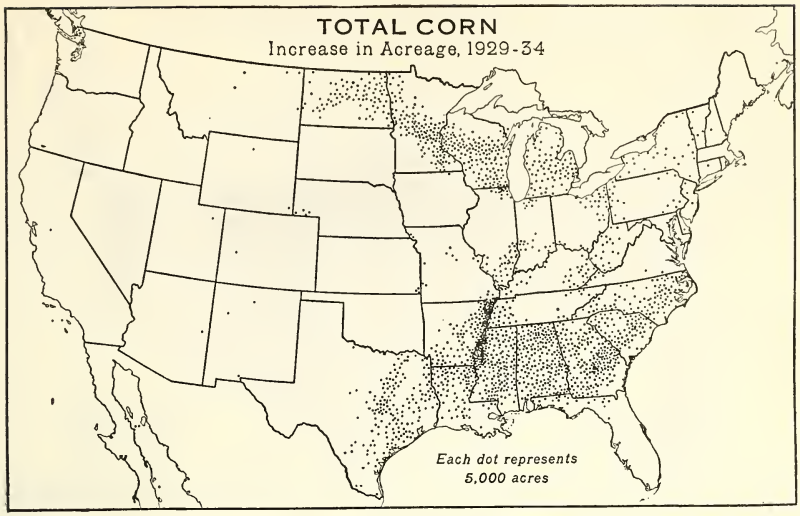
BAE 24933

FIGURE 30.—Most of the increase in corn acreage between 1924 and 1929 occurred in the Great Plains, notably in eastern Nebraska and along the Nebraska-Kansas border. In part this increase was the result of favorable seasons; in part it reflected a tendency toward increased livestock production throughout the region. Outside the Great Plains the increases were local and not important, except in northwestern Ohio and adjacent Indiana, where the excellent soils of the old Black Swamp have been gradually drained and used for crops, principally corn.



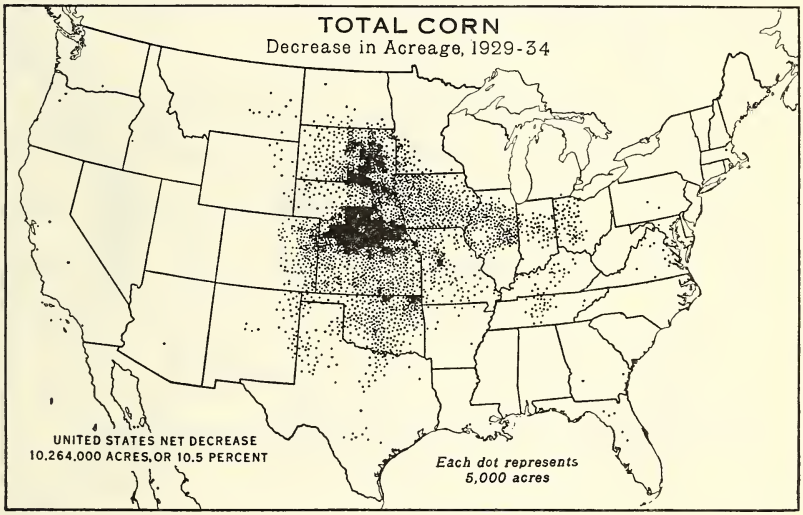
BAE 24932

FIGURE 31.—The decrease in corn acreage between 1924 and 1929 occurred principally in four regions: (1) The Lakes States, where urban industry was attracting men from the farms; (2) Montana and North Dakota, where a reaction from diversified farming was inducing larger wheat acreages; (3) along the southern margin of the Corn Belt, where hay and pastures were replacing corn in part because of soil erosion; and (4) in much of the old South where cotton was tending to replace corn, because of fair prices for cotton and good seasons.



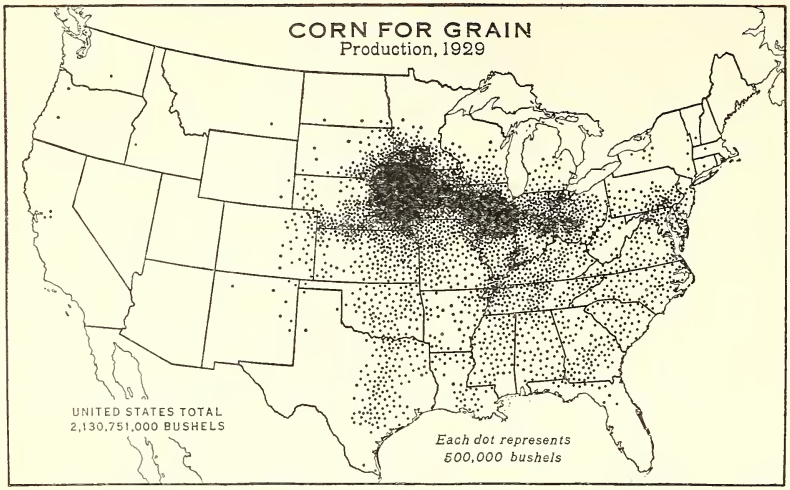
BAE 31166

FIGURE 32.—The increase in corn acreage from 1929 to 1934 was striking in the Great Lakes States and throughout the Cotton Belt, except the drought-stricken western part. In the South this increase was due to diversification campaigns which were reemphasized by the Agricultural Adjustment Administration program. These reduced the acreage of cotton in favor of food and feed crops. In the Lakes States the increase was part of an increase in total crop acreage, associated with the efforts of dairy farmers during the depression to buy less grain.



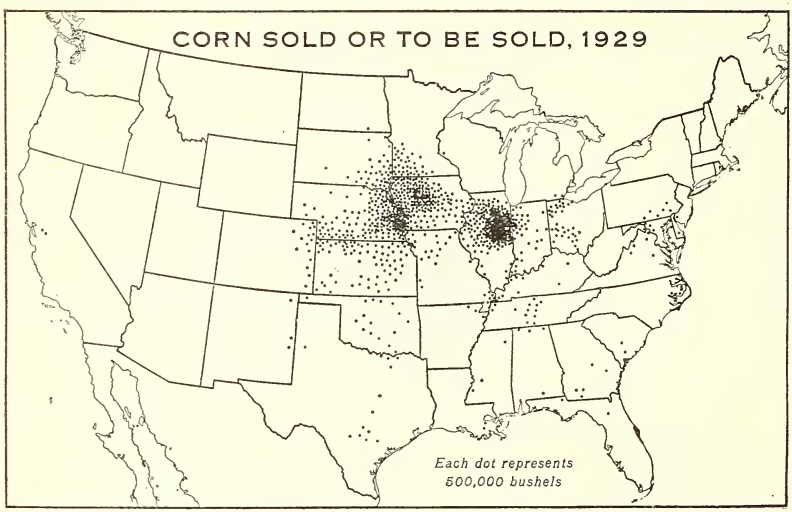
BAE 31167

FIGURE 33.—The great decrease in corn acreage in the triangular-shaped area extending from South Dakota to Oklahoma and western Ohio was the result principally of the unprecedented drought of 1934 and partly of the agricultural adjustment program. The corn crop in many counties was almost a total failure in the western Corn Belt and Great Plains. Although the drought of 1934 was the most extensive and severe ever experienced in the United States, the total decrease in corn acreage in the Nation between 1929 and 1934 was only about 10 percent. Production decreased 45 percent.



BAE 24487

FIGURE 34.—Corn is the great American cereal, constituting about 60 percent of the tonnage of all cereals grown in the United States, and over 50 percent of the value. More than half of this crop is produced in the Corn Belt. But corn is the leading crop in value in the Corn and Winter Wheat Belt, and is the all-important cereal in the Cotton Belt. Corn is a very productive crop, yielding in general about twice as many pounds of grain per acre as does wheat, oats, barley, or rye.



BAE 31109

FIGURE 35.—In the Corn Belt most of the corn is fed to hogs, cattle, and horses on the same farm on which it is grown. But a considerable quantity—amounting to nearly one-half of the crop in Illinois in 1929 and about a fourth in Iowa and in South Dakota, and over a third in Nebraska—was sold to nearby farmers, was shipped to consumers in the South and East, or was made into starch and glucose. The corn that the map indicates as sold from the farms in Pennsylvania, Maryland, and several Southern States consists mostly of sales to neighboring farmers.

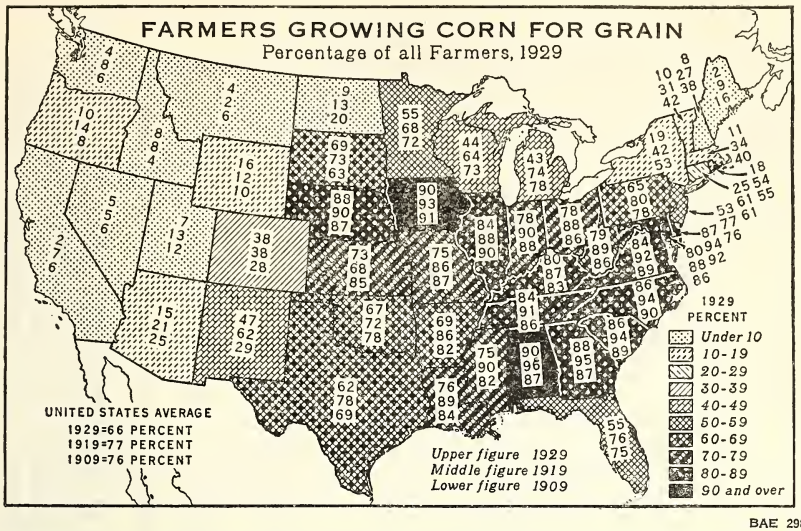


FIGURE 36.—In this map again is shown the importance of corn in the agriculture of the Nation. More than three-fourths of all farmers east of the Great Plains and south of the Great Lakes grow corn for grain. In Iowa and Alabama 90 percent of the farmers grew corn for grain in 1929. In the southeastern Cotton Belt more farmers grow corn than cotton. But apparently the proportion of the farmers who grow corn for grain decreased in nearly all States between 1919 and 1929. The decrease was notable in the Dairy Belt.

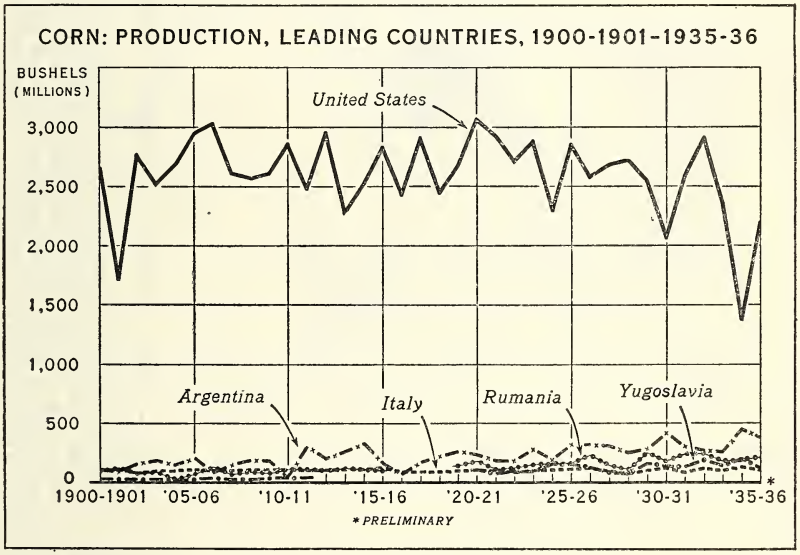


FIGURE 37.—The United States is by far the greatest corn-producing country in the world. Since 1900 annual production has averaged about 2½ billion bushels, including the estimated equivalent in grain of corn cut for fodder and silage and hogged or grazed off. The general trend has been downward since about 1920. In the drought year 1934 the Nation produced the smallest corn crop in more than 50 years. The only competitors of the United States, of consequence, are Argentina and the countries of the Danube Valley. (Rumania and Yugoslavia boundaries are pre-war prior to 1918.)

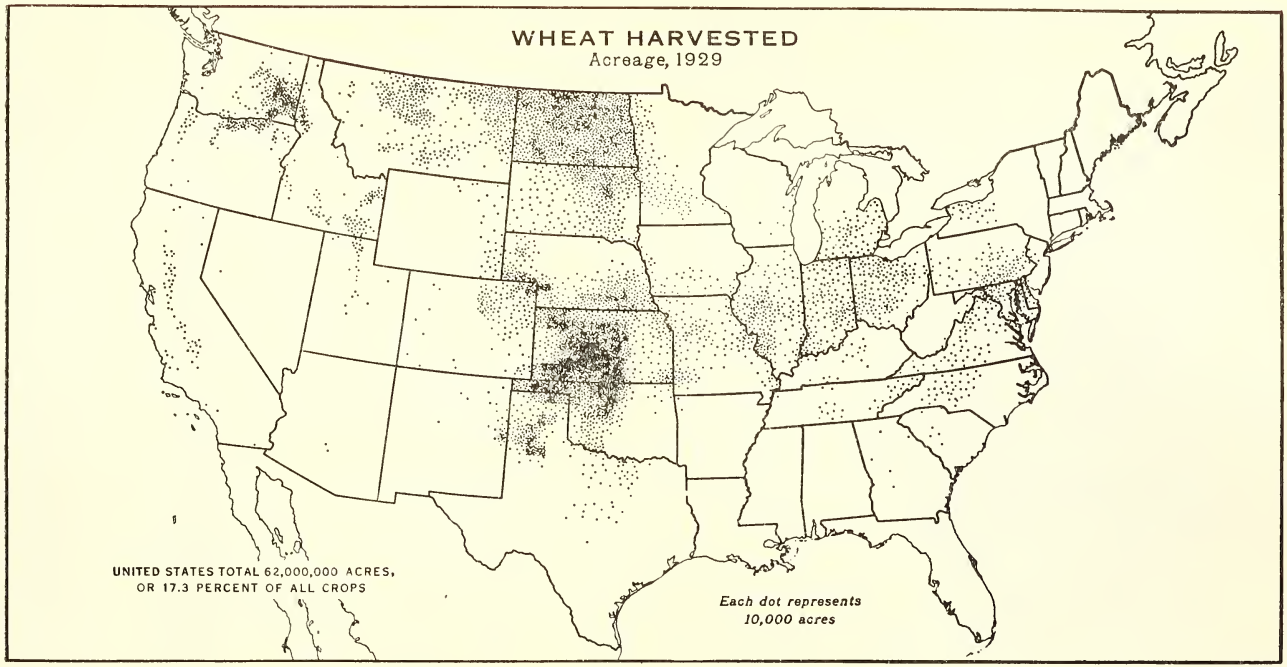


FIGURE 38.—The United States produces about one-fifth of the world's wheat, as compared with nearly three-fifths of the world's corn and cotton. Seventy percent of the wheat acreage was in the Great Plains States in 1929, and wheat is an important cash crop entering into the rotation of the eastern Corn Belt, and of the limestone valleys and Piedmont from Pennsylvania to North Carolina. The wheat region of the Great Plains is divided by the Nebraska Sand Hills into the Hard Winter Wheat Belt to the south and the Hard Spring Wheat Belt to the north. The Columbia Plateau produces both winter and spring wheat.

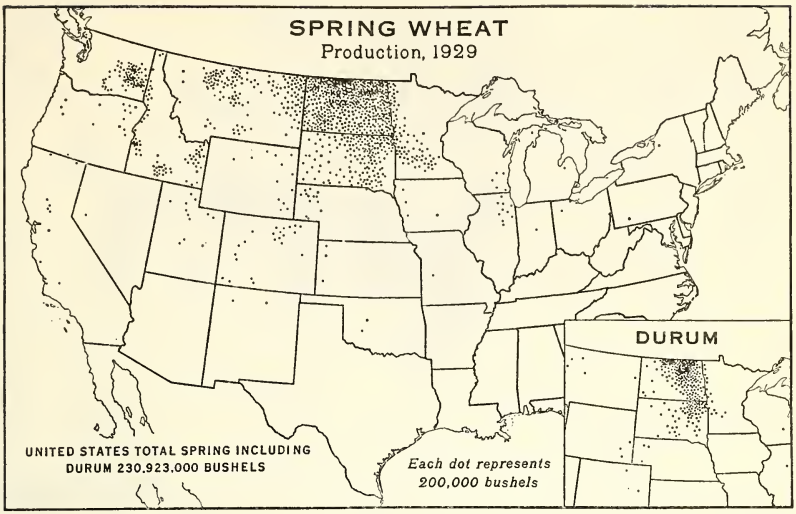


FIGURE 39.—Spring wheat constituted nearly 40 percent of the acreage of all crops in 1929 in the Spring Wheat Belt. A secondary center of production is located in the subhumid portions of Washington and Oregon. Scattered areas are found in Idaho, Utah, and Colorado. Practically no spring wheat is now grown east or south of Lake Michigan. The southern boundary of the Spring Wheat Belt is determined partly by the northern boundary of winter wheat, which is, in general, more productive and more profitable.

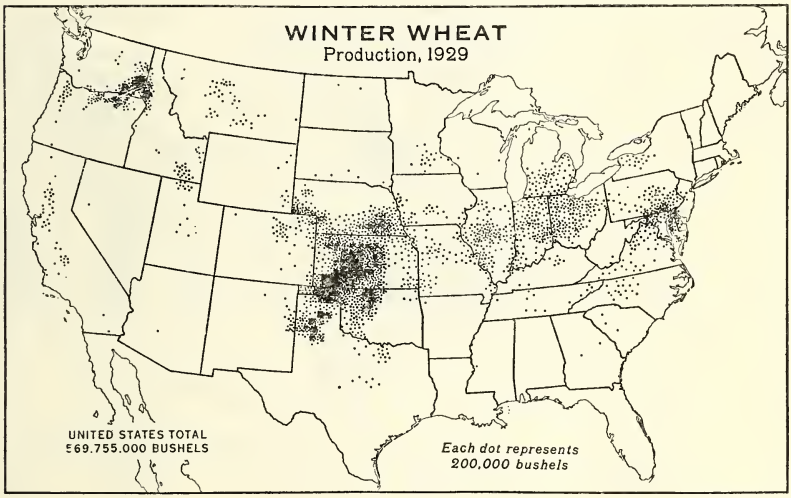


FIGURE 40.—There are three winter wheat areas—(1) the hard winter wheat region of Kansas and adjacent parts of Oklahoma, Colorado, and Nebraska, with an arm extending eastward into northern Illinois, (2) the soft winter wheat region which includes all the remaining eastern districts, and (3) the white (very soft) wheat districts of the Pacific Coast States. The southern boundary of the eastern belt follows the isotherm of 72° F. during the month preceding harvest (June 15). The northern frontier of winter wheat follows, in a general way, the mean winter isotherm of 17°.

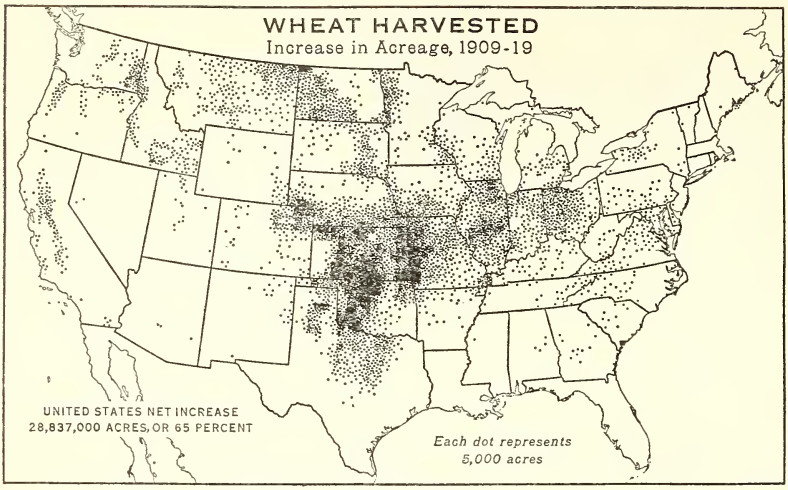


FIGURE 41.—This map reflects very largely the effect of World War conditions upon wheat growing. The urge of patriotism and of high prices led to an extraordinary extension of wheat acreage, especially in the Great Plains, except eastern North Dakota and in the Corn Belt. The largest increases occurred in Kansas, western Missouri, and Oklahoma. It must be recalled that the stimulus came within the period when the use of the tractor, combine, and associated machinery was spreading rapidly onto the plains east of the Rocky Mountains.

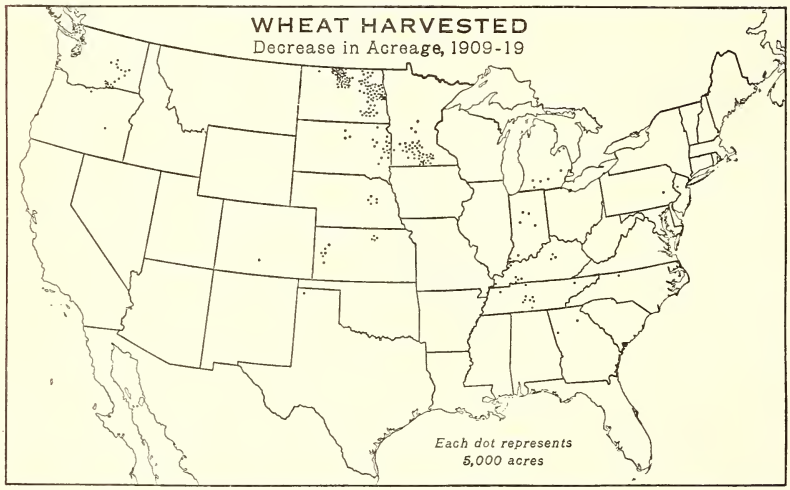


FIGURE 42.—The period 1909–1919 was, in general, one of expansion of wheat acreage. The few decreases shown in Minnesota and the Dakotas were due largely to drought in 1919 which reduced the acreage of wheat harvested. Elsewhere the decreases doubtless were local readjustments, wheat giving way to other crops in Kentucky and Tennessee, probably to tobacco mostly.

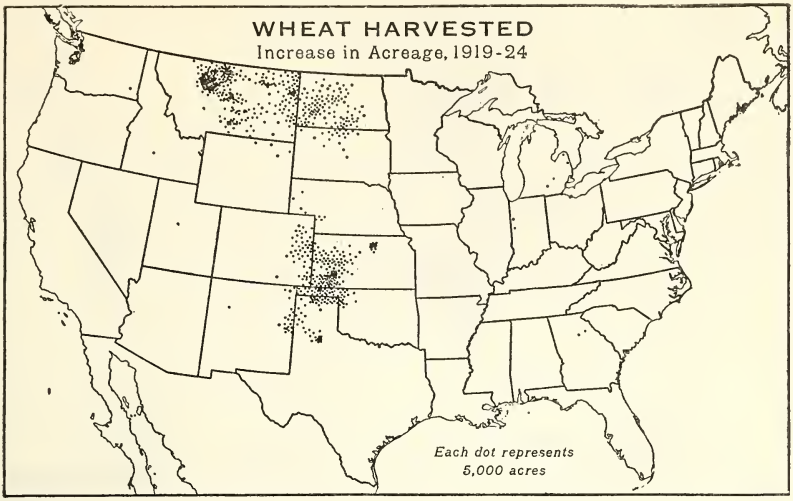


FIGURE 43.—The acreage of wheat harvested in 1924 was greater than in 1919 in only two sections—in the western frontier section of the Hard Winter Wheat Belt and in the western part of the Spring Wheat Belt. In the latter section the increase was nominal, as 1919 was a drought year and only half the acreage sown was harvested. The increase of acreage in part of the Winter Wheat Belt and maintenance of acreage in part of the Spring Wheat Belt was due largely to the introduction of the tractor and the harvester combine, which greatly reduced the costs of production.

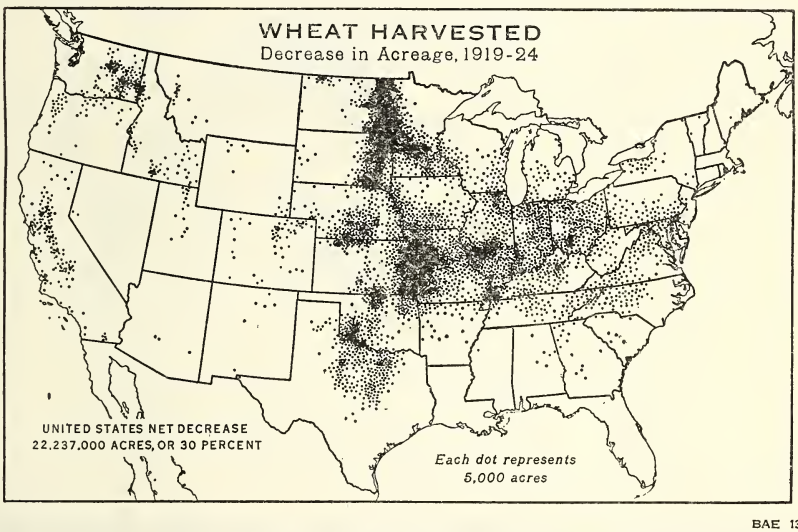


FIGURE 44.—In 1919 the largest wheat acreage in the Nation's history was harvested, in part the result of wartime prices (which collapsed in 1920). In 1924 the acreage harvested was the smallest for 7 years. Although the map, therefore, exaggerates the decrease from the standpoint of normal years, the location of the decreasing areas is approximately correct. Especially notable was the decrease in Minnesota and the eastern parts of the Dakotas and in the Corn and Winter Wheat Belt, which extends from eastern Kansas across Missouri and southern Illinois to Virginia and Pennsylvania.

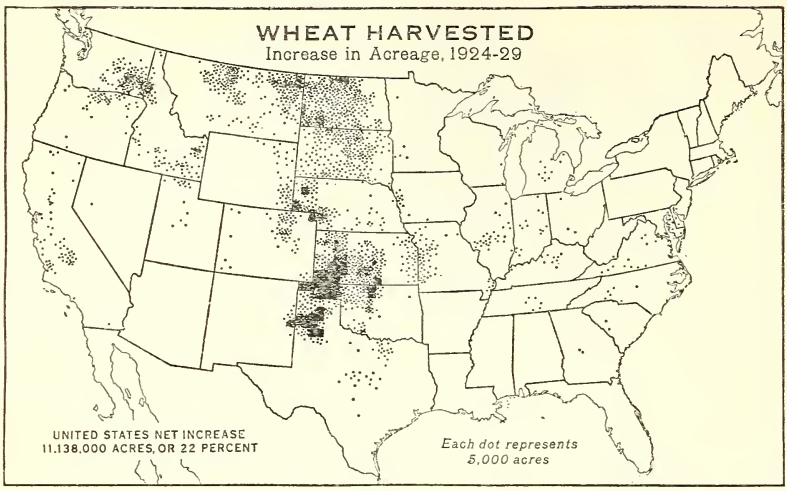


FIGURE 45.—Wheat prices had recovered somewhat by 1925 and there was a tendency to extend the acreage into the drier parts of the Great Plains. This tendency was in large measure an outgrowth of the development of the small harvester-combine and associated power machinery, which was especially adapted for use on the large level fields of the Plains. Wheat production by 1929 again advanced entirely across the Great Plains to the foot of the Rocky Mountains in eastern Colorado and northern Montana.

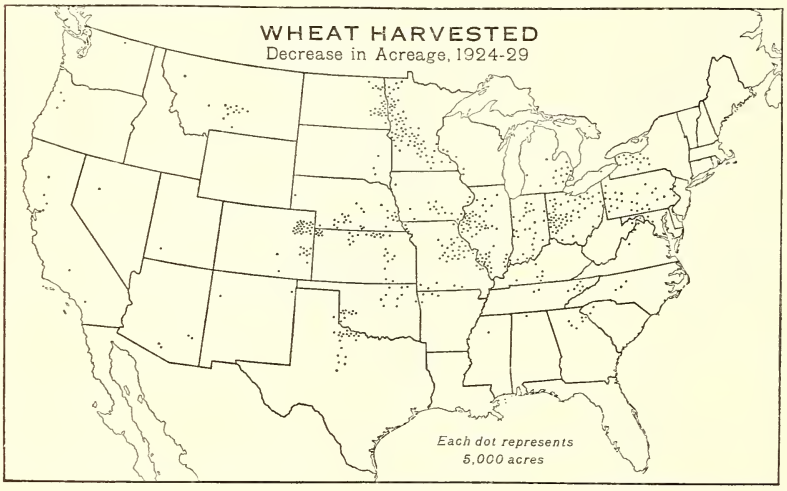


FIGURE 46.—Decreases in wheat acreage between 1924 and 1929 were mostly local and small. Drought may account for the change in some counties; other changes were probably the result of readjustments in the crop rotation. It is significant that wheat acreage continued to decrease along the eastern margin of the Spring Wheat Belt in Minnesota. Dairying has been pushing into the Spring Wheat Belt in Minnesota for a quarter of a century while the corn and hog system of farming has been pushing spring wheat back along the southeastern margin of the belt.

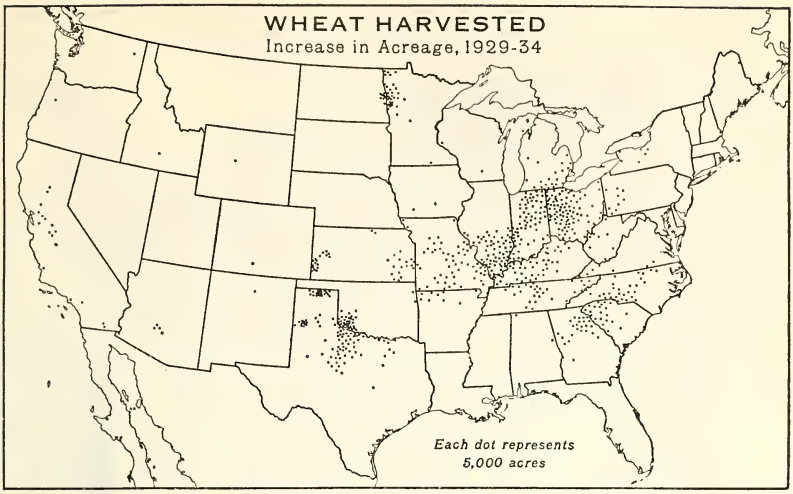


FIGURE 47.—The increase in acreage of wheat between 1929 and 1934 occurred principally in the partially self-sufficing Corn and Winter Wheat Belt, in the originally forested part of the Corn Belt, in the Piedmont of the Carolinas and Georgia, and in several counties in the western part of the Cotton Belt. The change in acreage was doubtless associated with the tendency during the depression toward greater diversity and self-sufficiency and, in the Cotton Belt districts, with adjustment programs as well.

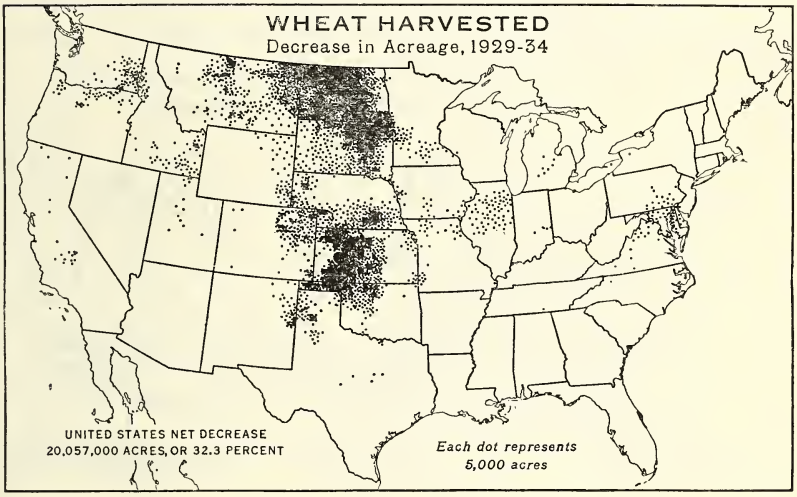
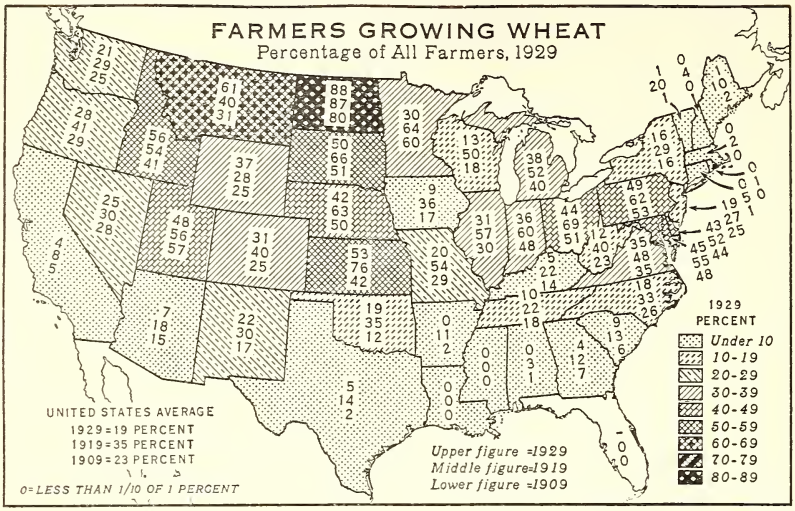
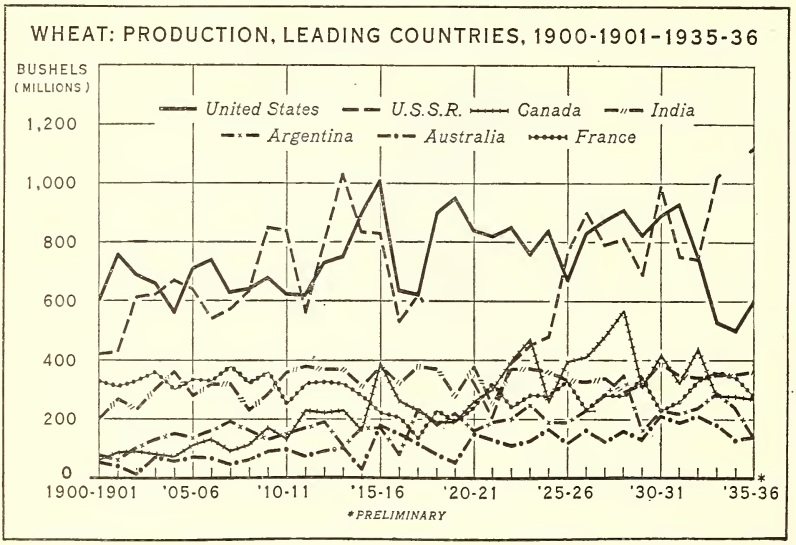


FIGURE 48.—In 1934 the worst drought in more than 50 years occurred in the Great Plains. And in the same year the program of the Agricultural Adjustment Administration began to be effective. The combined result of these two influences was to bring about a decrease in wheat acreage of one-third in 1934, as compared with 1929. The greatest decreases occurred in the very centers of the hard winter and hard spring wheat regions. Not only was the planted acreage reduced in 1934, but much wheat that was planted was abandoned because of severe drought before harvest.



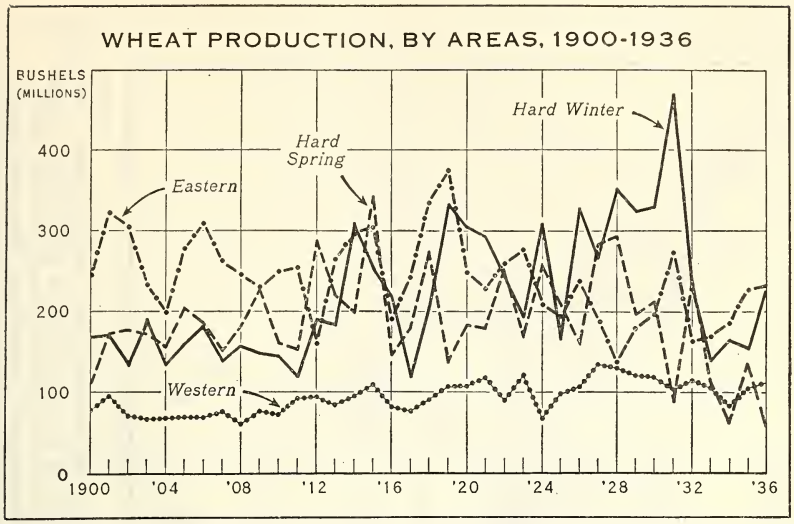
BAE 29869

FIGURE 49.—The proportion of the farmers who grow wheat is greater in the spring wheat region than in the winter wheat regions. The proportion is almost as high in Ohio and Pennsylvania as in Nebraska and Kansas. In most of the States outside the Great Plains the proportion of the farmers growing wheat in 1929 was much less than in 1909. Nevertheless, a notable increase in wheat acreage occurred, but this was mostly in the Great Plains.



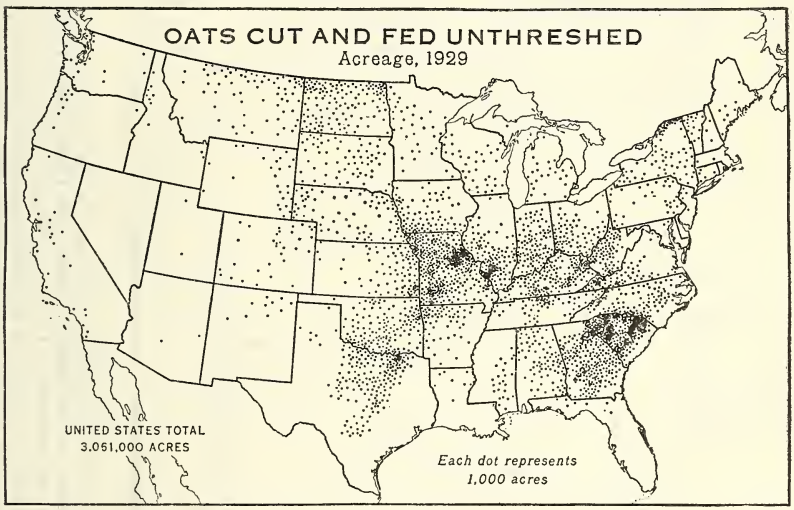
BAE 31187

FIGURE 50.—The United States has been for a century one of the greatest wheat-producing countries in the world. The trend of production was upward until 1898, then horizontal until the World War, then slightly downward until 1931 with a great reduction since, mostly because of drought. The Union of Soviet Socialist Republics produced as much as the United States for a decade before the World War, when a devastating decline occurred. Since 1921 Russian production has increased rapidly. Canada, Argentina, and Australia have become important producers of wheat since 1900. (French and Russian boundaries prior to 1917 are pre-war boundaries.)



BAE 31210

FIGURE 51.—Most bread flour is made from hard spring wheat and hard winter wheat. There was an upward trend in the production of hard winter wheat from 1911 to 1931; then drought, low prices, and other factors reduced production enormously. Production of hard spring wheat was maintained from 1912 to 1928. The general trend in production of eastern winter wheat, used mostly for pastry, has been downward since the World War boom. The soft wheats of the Pacific Coast States, on the other hand, have shown a slow upward trend in production for more than 30 years.



BAE 24993

FIGURE 52.—About 8 percent of the acreage of oats harvested in 1929 was fed unthreshed. This practice is common in South Carolina and Georgia and in a belt extending from West Virginia to Missouri and central Texas, also along the Canadian border in New York and North Dakota. How extensively oats are cut and used unthreshed depends upon conditions of the season and markets. When the crop is short and poor and when oats are low in price, there is a greater tendency to cut and feed them as hay.

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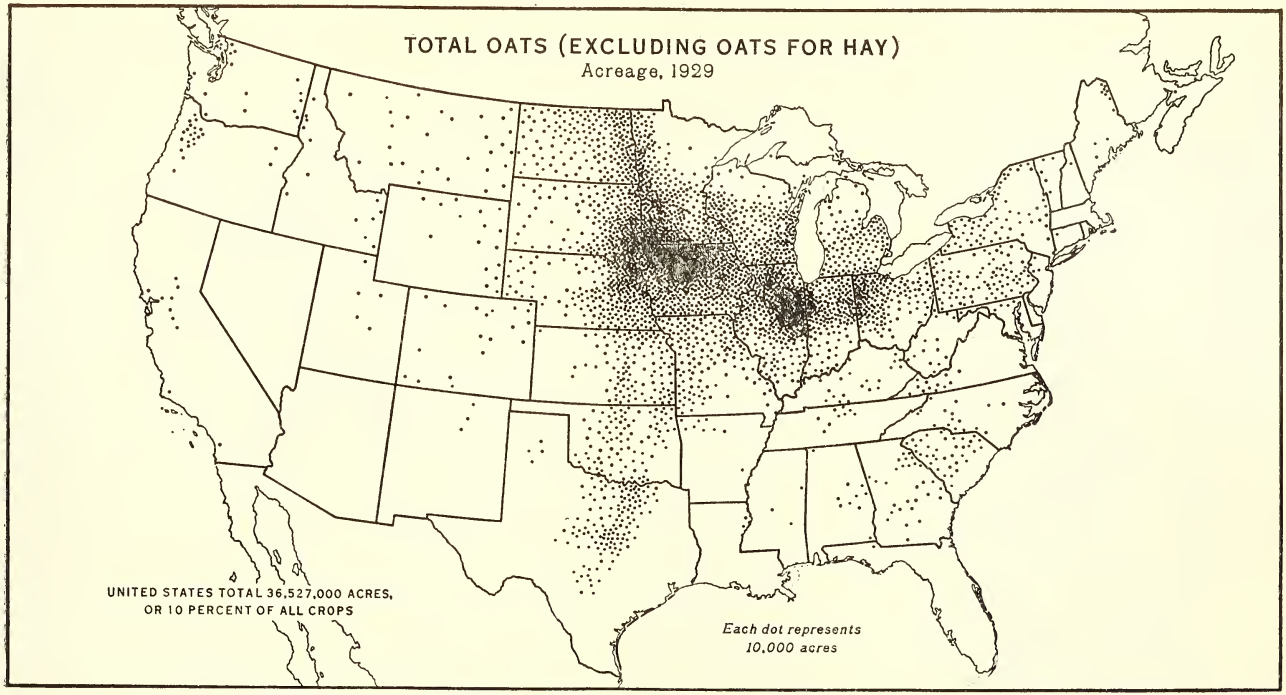
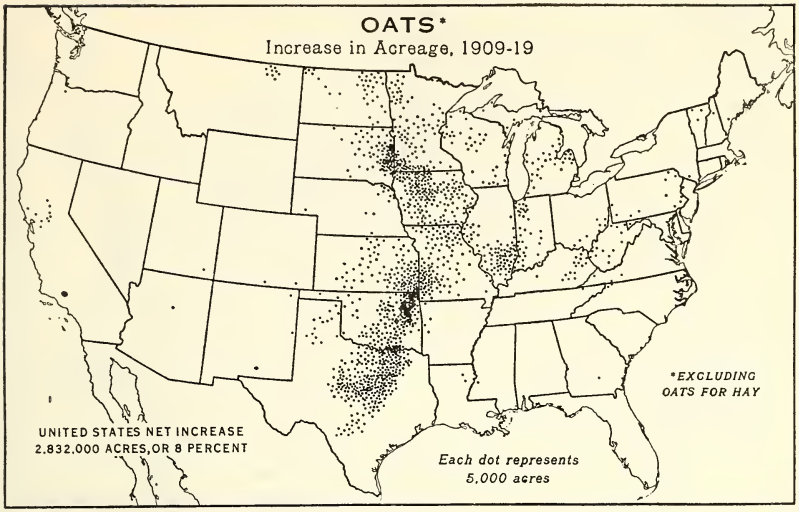
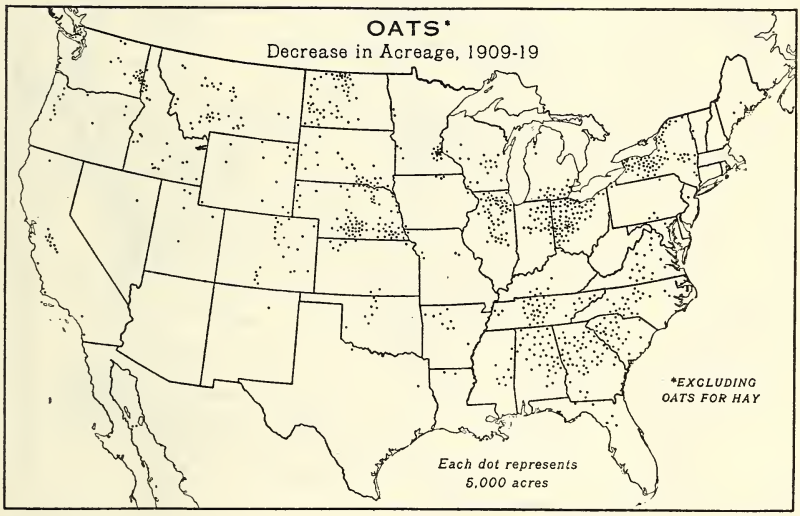


FIGURE 53.—The Corn Belt, particularly the northern part, is also the center of the production of oats, and the crop is very important in the Spring Wheat and Dairy Belts to the north and east. In most crop rotations of these regions small grains—winter wheat to the south and oats to the north—are included. Oats are the principal small grain fed to livestock, and in regions of livestock and diversified farming this feed crop attains greatest importance. Oats are adapted especially to a fairly cool, moist climate. Nevertheless, a large acreage extends southwestward across Oklahoma to central Texas. This acreage, partly fall-sown, is attributable more to the need of feed for horses than to favorable climatic conditions.



BAE 31038

FIGURE 54.—The period 1909–19, in general, was one of increase in grain growing. The principal reason was the war-time stimulus, including the high prices for both grain and livestock which came during and shortly after the World War. The increase in acreage of oats during that period was most notable in a northeast-southwest strip of territory extending along the forest margin of the prairies from Texas to Indiana, then northwestwardly across Iowa to the Dakotas. This increase in acreage of oats was associated with a decrease in acreage of corn and pasture.



BAE 31039

FIGURE 55.—The areas of decrease in acreage of oats between 1909 and 1919 were widely scattered, but can be combined mostly into three groups: (1) Western New York, northwestern Ohio and adjacent Indiana, and northern Illinois, where decrease in oats was accompanied by a decrease in acreage of corn and an increase in acreage of wheat; (2) the Piedmont from Virginia to Alabama, also most of Tennessee, in part of which area cotton acreage was increasing, particularly in Alabama; and (3) the northern Great Plains, where war-time demand for wheat reduced the acreage in oats locally.

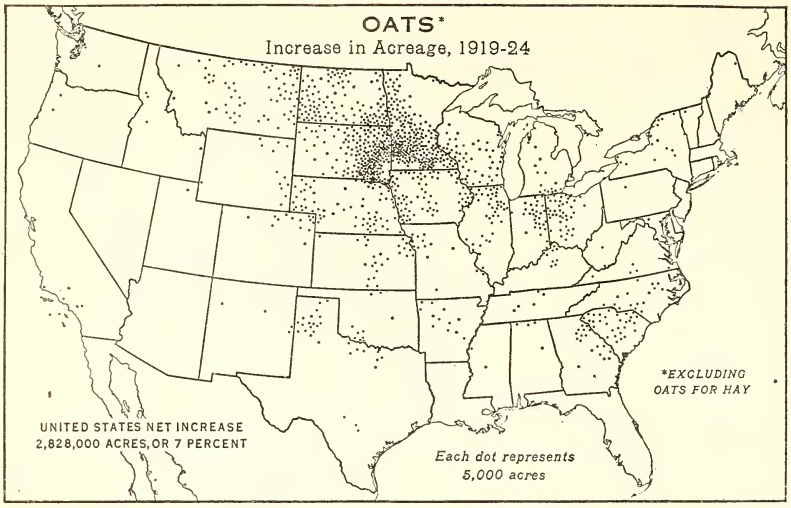


FIGURE 56.—The increase in acreage of oats between 1919 and 1924 occurred mostly in the Spring Wheat Belt and along the northern and western margin of the Corn Belt, accompanying the decrease in wheat and increase in corn and hogs. In the Nation as a whole, increase in oats acreage exceeded the decrease. This net increase on 2,828,000 acres is about equal to the acreage in 1924 of oats cut for grain when ripe or nearly ripe and fed unthreshed, much of which was probably not reported in the 1920 census. Probably the actual net increase in the oats area was little more than 1,000,000 acres.

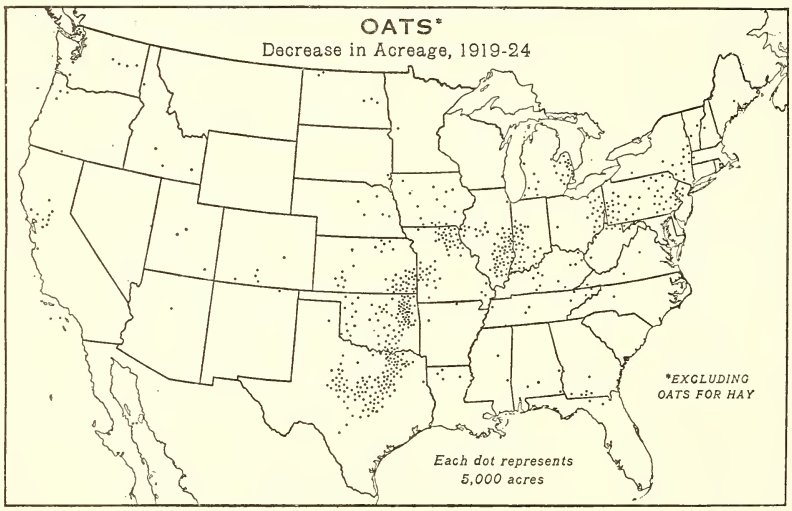


FIGURE 57.—The decrease in acreage of oats between 1919 and 1924 was small compared with the decrease in wheat acreage. It occurred principally along the southern margin of the oats-growing region, and along the zone between the increase and decrease of corn acreage. (See figs. 28 and 29.) Owing to the omission of the census question on oats cut and fed unthreshed in 1919, the decrease in acreage of oats shown on this map is probably smaller than that which actually occurred. This decrease presumably was due to seasonal conditions and the substitution of hay or pasture for oats.

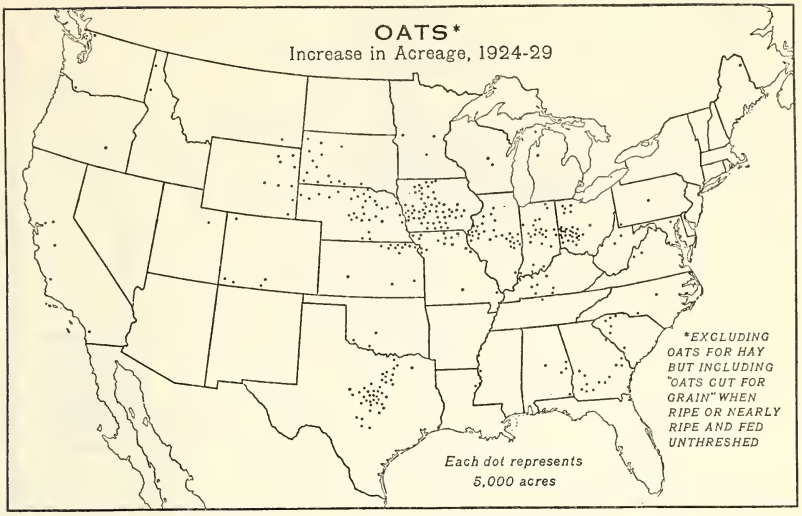


FIGURE 58.—The Nation's acreage of oats showed considerable decline in the period 1924–29. This map indicates a scattered increase of acreage through the Corn Belt and westward into Wyoming, also in central Texas and southern Georgia. It is difficult to account for the occurrence of larger acreage of oats in the Corn Belt, particularly in 1929, except by its use as an alternative in crop rotation and on the grounds of preference due to the current price situation.

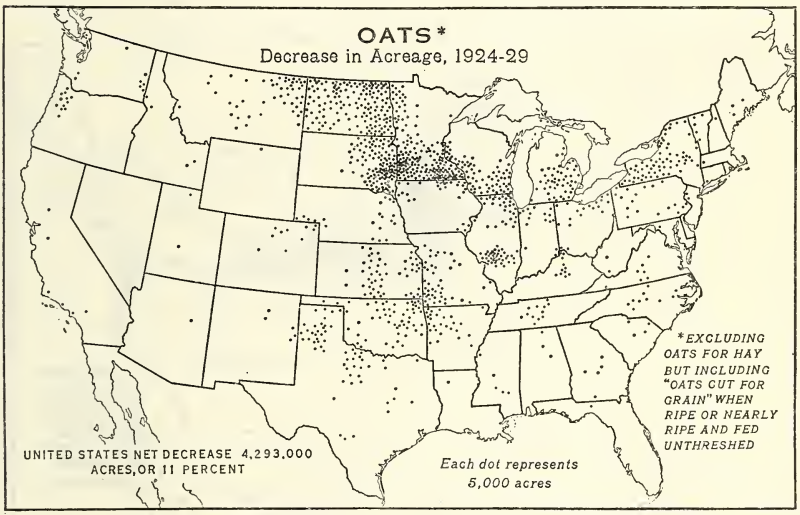


FIGURE 59.—The decrease in acreage of oats between 1924 and 1929 in Minnesota and the Dakotas evidently was a reaction from the increase between 1919 and 1924 (fig. 56), but to the eastward was mostly a continuation of previous trends (figs. 55 and 57). With the remarkable decline in the number of horses in this country, the need has disappeared for as large an acreage of oats as formerly. The location of the heavy decline along the northern margin of the region of commercial production may be due to the advance of dairying.

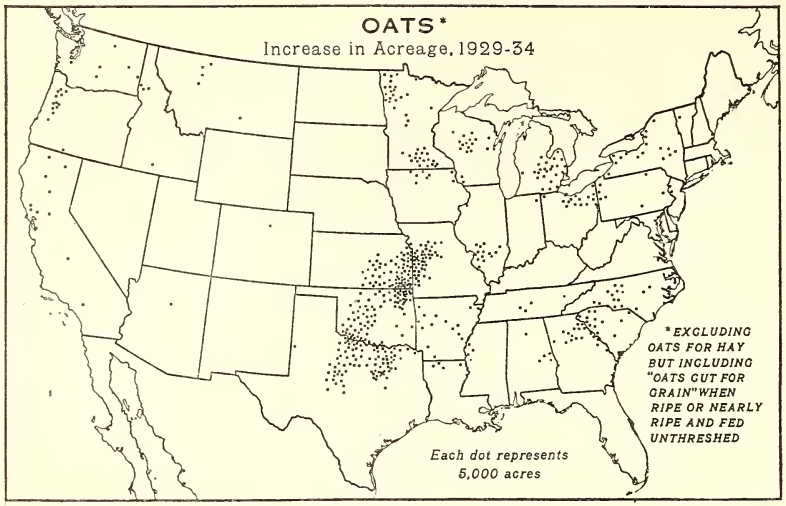


FIGURE 60.—The belt of increase in acreage of oats between 1929 and 1934 extending from central Missouri to central Texas was much the same area as the belt of decrease during the previous decade (figs. 57 and 59). This is true also in parts of Illinois, Michigan, Ohio, and Pennsylvania. These increases may be associated with the tendency during the depression to return to horses and mules, particularly in the less-fertile areas. But in the Nation as a whole the drift was toward fewer horses and a rapidly decreasing acreage of oats (fig. 61).

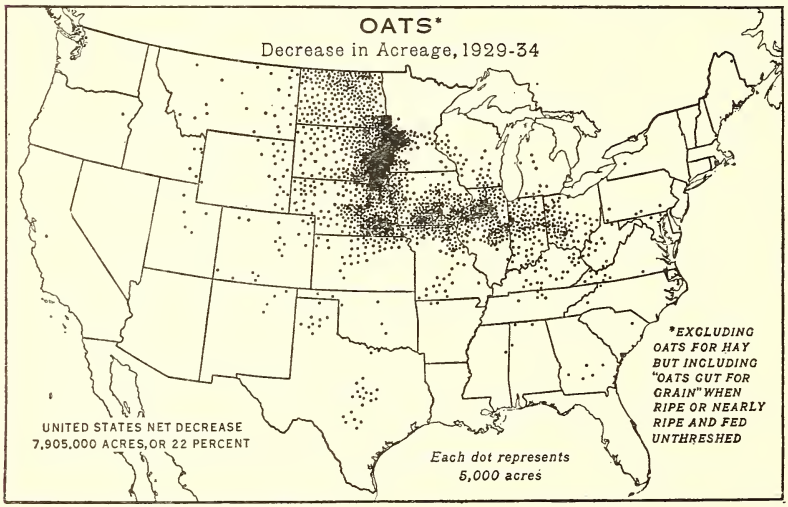
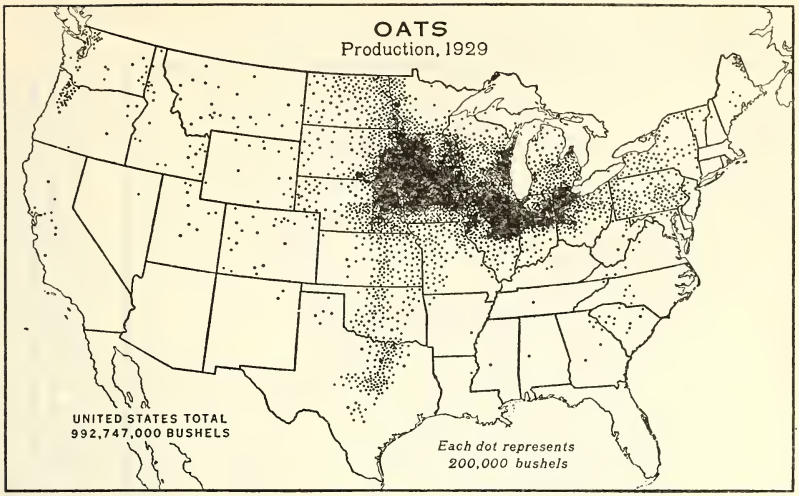
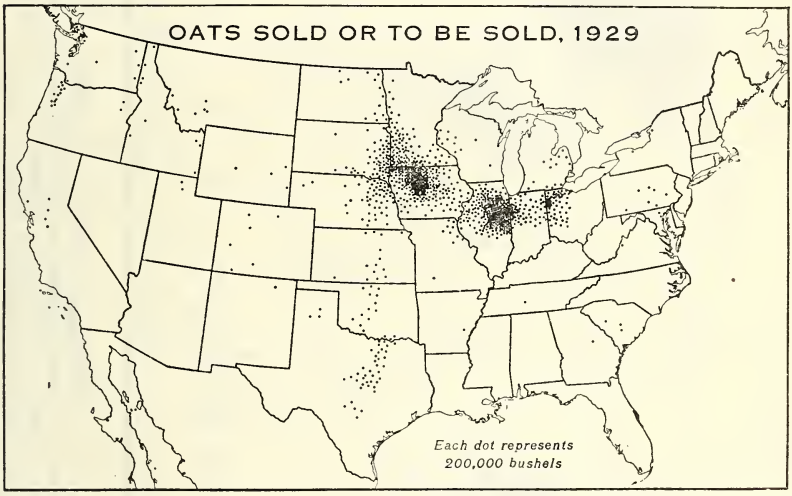


FIGURE 61.—This map reflects the influences both of a bad drought year in 1934 and of the decreasing demand for oats. The chief influence in this year was drought. The striking loss of acreage in eastern South Dakota and thence southeastward through the Corn Belt coincides with the areas of intense dryness. The total decrease in acreage of oats harvested in 1934 under 1929 was nearly 8 million acres, or 22 percent of the crop.



BAE 24937

FIGURE 62.—The crop season of 1929 was rather dry in the Central West, and some small-grain acreage was abandoned. The crop of oats was below average. The area of intensive production of oats is well illustrated, however, by this map. The crop occupies an important place in the Corn Belt and in the southern Dairy Belt system of farming. It is an important cash crop and at the same time is grown by nearly all farmers for feed. South of the Corn Belt the production of oats is practically confined to the prairie regions.



BAE 31110

FIGURE 63.—Oats were sold from the farm in the same two areas in northern Illinois and in northwestern Iowa and adjacent districts from which corn was sold (fig. 35). The resemblance even extends to the lesser area in Ohio. In 1919 nearly 300,000,000 bushels were sold, but in 1929 sales were considerably smaller. Shipment to the cities for horse feed has nearly ceased, but large quantities are still sold to southern and eastern farmers, and a few million bushels of the highest quality are used to produce rolled oats for human consumption.

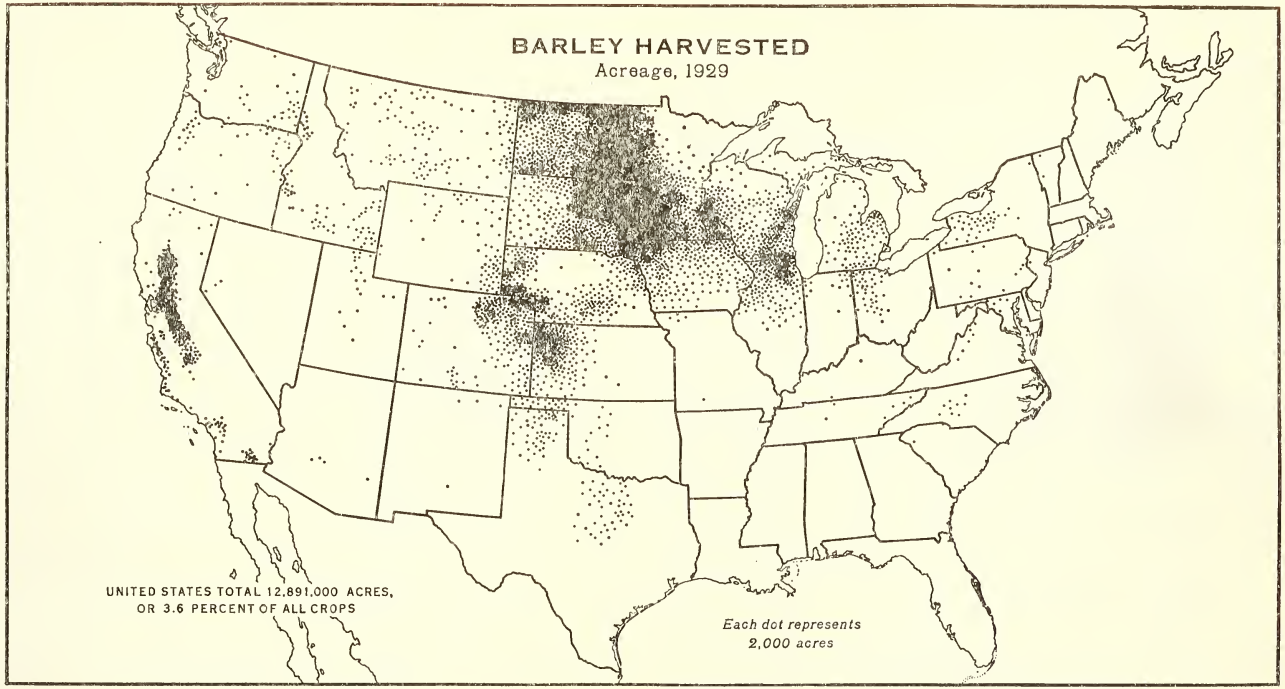
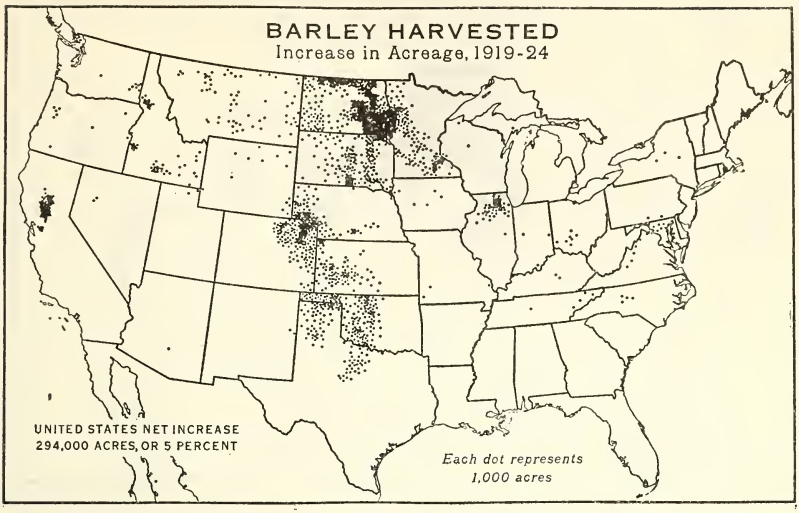
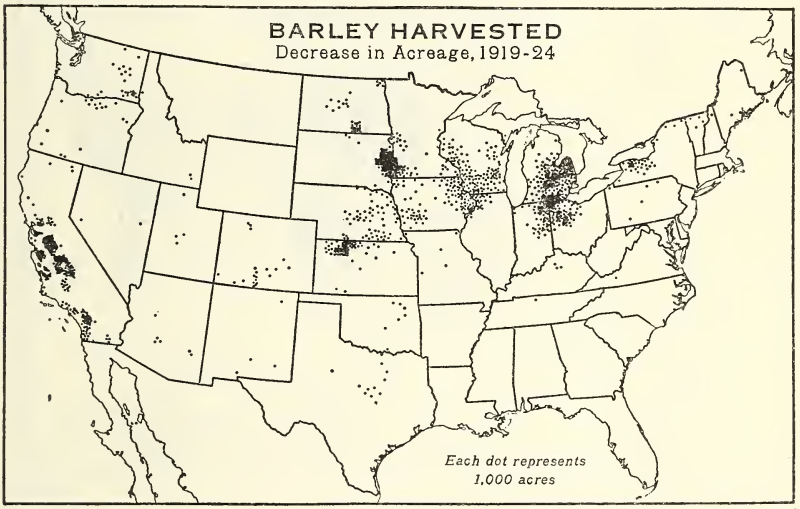


FIGURE 64.—A dot on this map represents only one-fifth as much acreage as on the corresponding maps for corn, wheat, and oats. Barley is a minor crop in the United States compared with these crops, except in the Spring Wheat and Hard Winter Wheat Belts, the valleys of California, and in southeastern Minnesota, southeastern Wisconsin, and northern Illinois, where barley has persisted for a half century. Some varieties of barley are sown in the fall in the Southwest, thus escaping most of the summer drought and heat, and largely replace corn for feed. Other varieties are cold-resistant and replace corn in the Northwest.



BAE 18946

FIGURE 65.—The increase of barley acreage after the World War, like the decrease of wheat acreage, occurred mostly in the Great Plains, both in the spring wheat and the hard winter wheat regions. Locally important increases also occurred in northern Illinois and northern California. Drought-resistant varieties of barley have been found well adapted to the soils and normal climate of the Great Plains, and the tendency is for barley to be grown to an increasing extent in the United States, as in southern Europe and northern Africa, along the desert's edge.



BAE 18945

FIGURE 66.—Each dot in this and the preceding map represents only one-fifth as much acreage as in the corresponding maps for corn, wheat, and oats. The decrease in barley acreage between 1919 and 1924 occurred principally in Michigan and northwestern Ohio, in Wisconsin and Iowa, in a few counties of eastern South Dakota, and in California, south and east of San Francisco Bay. In general, these are the older barley-growing districts, which found competition difficult with the more extensive methods of farming in the Great Plains. Decreased use for brewing may also have been a factor.

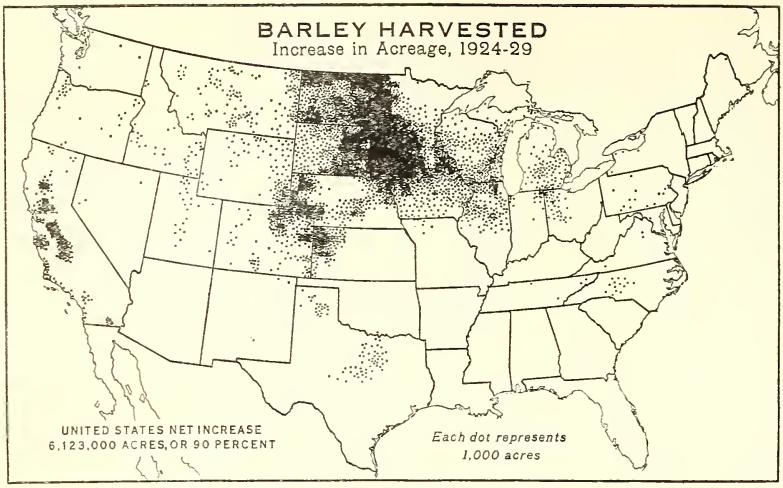


FIGURE 67.—During the 5 years, 1924–29, barley acreage in the United States nearly doubled. The tendency to increase acreage in the Spring Wheat Belt continued, the increase in Minnesota and the Dakotas exceeding 6,000,000 acres. Other areas of substantial increase were in northern Iowa, northwestern Kansas, northeastern Colorado and western Nebraska, and in the central valleys of California. This trend toward a larger barley acreage reflects the fact that the crop increased in favor as a feed.

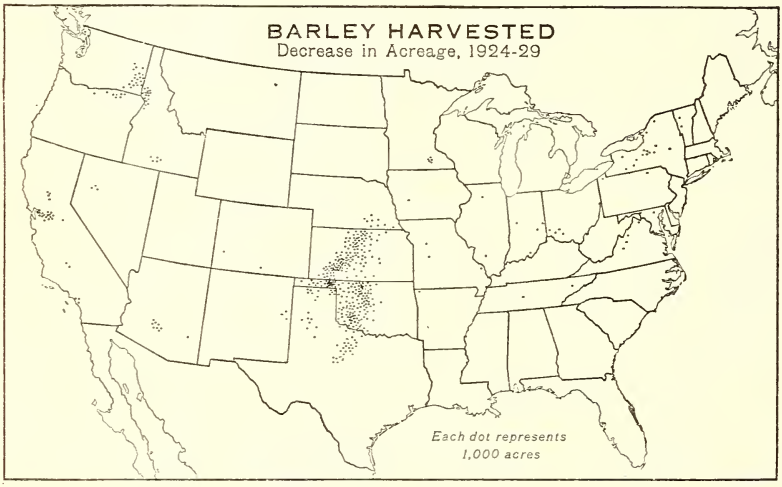
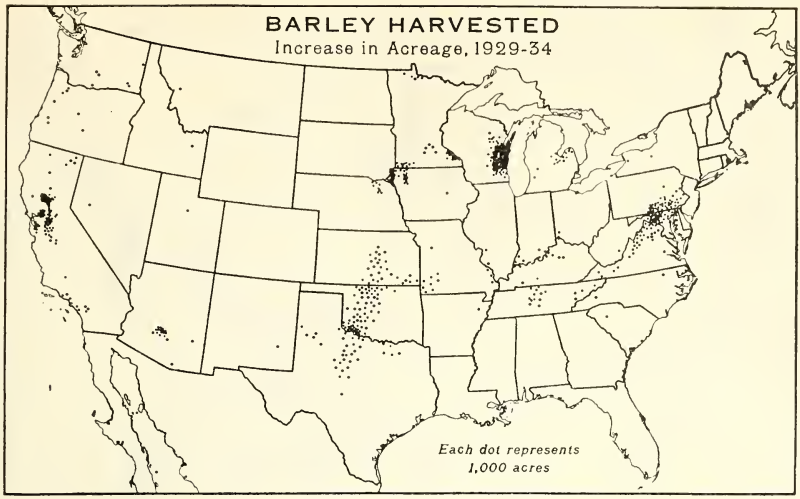
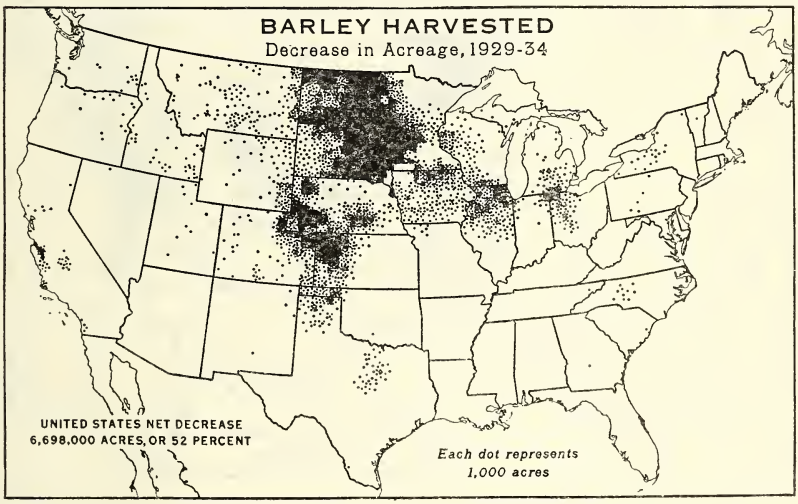


FIGURE 68.—The only areas that showed significant decrease in acreage of barley between 1924 and 1929 were in west-central Kansas and western Oklahoma, and the Columbia Plateau area of eastern Washington and Oregon and northern Idaho. Smaller decreases may be noted in California, Arizona, and several eastern States. The causes of these decreases in acreage are not clear.



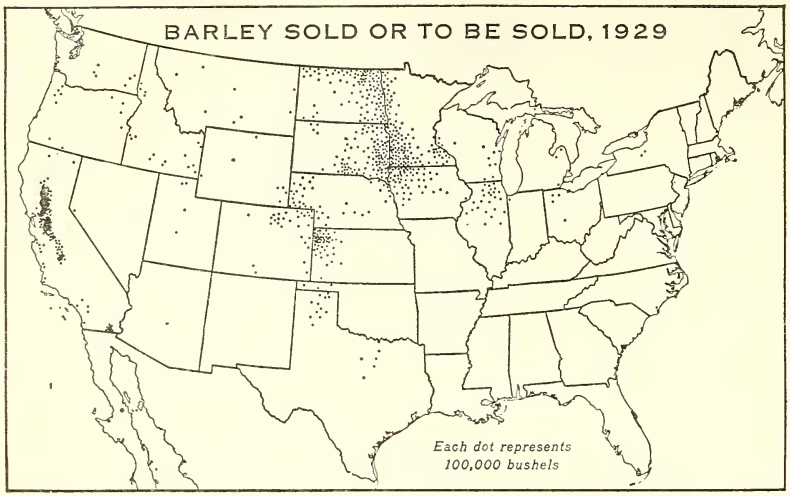
BAE 31126

FIGURE 69.—Those areas that reported an increase in barley acreage between 1929 and 1934 were primarily those that escaped the great drought of 1934. There was a somewhat larger acreage of barley in southern Pennsylvania, the valley and piedmont of Maryland and northern Virginia, in eastern Wisconsin, in southeastern South Dakota and adjacent areas in Iowa and Minnesota, in western Oklahoma and adjacent areas in Kansas and Texas, and in several valleys in California. Introduction of fall-sown varieties accounts for some of these increases.



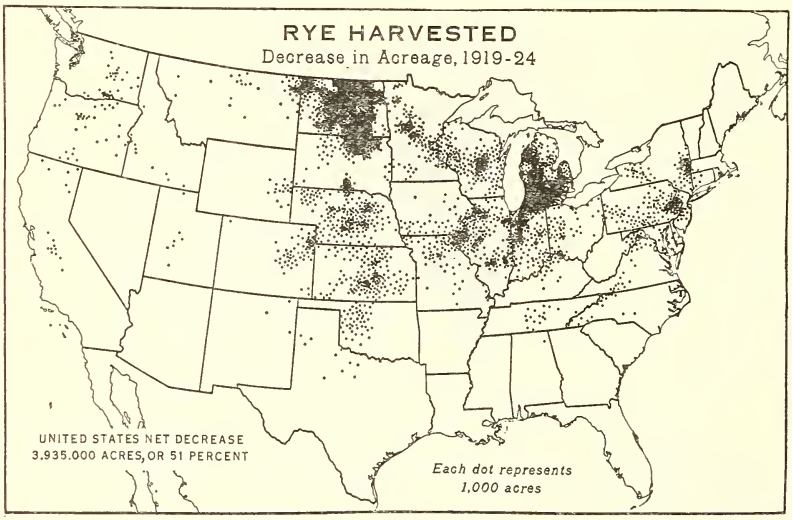
BAE 31127

FIGURE 70.—The repeal of the prohibition amendment in 1933 favored an increase in barley acreage. Nevertheless, acreage in 1934 was less than half that in 1929. This decrease was principally the result of the great drought in 1934. The territory most severely hit by drought that season was the Spring Wheat Belt, the western Corn Belt, and the Hard Winter Wheat Belt. There was almost a complete crop failure in the Spring Wheat Belt.



BAE 31111

FIGURE 71.—This map indicates the areas where barley was grown mainly as a cash crop in 1929. The dominant use of the grain before the repeal of the prohibition amendment was as feed for livestock, although some malting barley for export was grown, especially in California. Previous maps show the areas of production of this grain primarily as a feed crop. The map above shows that much of the barley in California and some in the Spring Wheat and Winter Wheat Belts was sold for brewing.



BAE 19677

FIGURE 72.—The decrease in rye acreage between 1919 and 1924 was almost universal. The heaviest decreases took place in North Dakota and Michigan, but the decrease was relatively as great in many other districts. Practically the only increase was in a few counties in Minnesota and in the eastern parts of the Dakotas. As agriculture in Europe recovered from the World War, the exports of rye declined to about one-half the 1919–22 level. By 1925 production was almost down to the pre-war level.

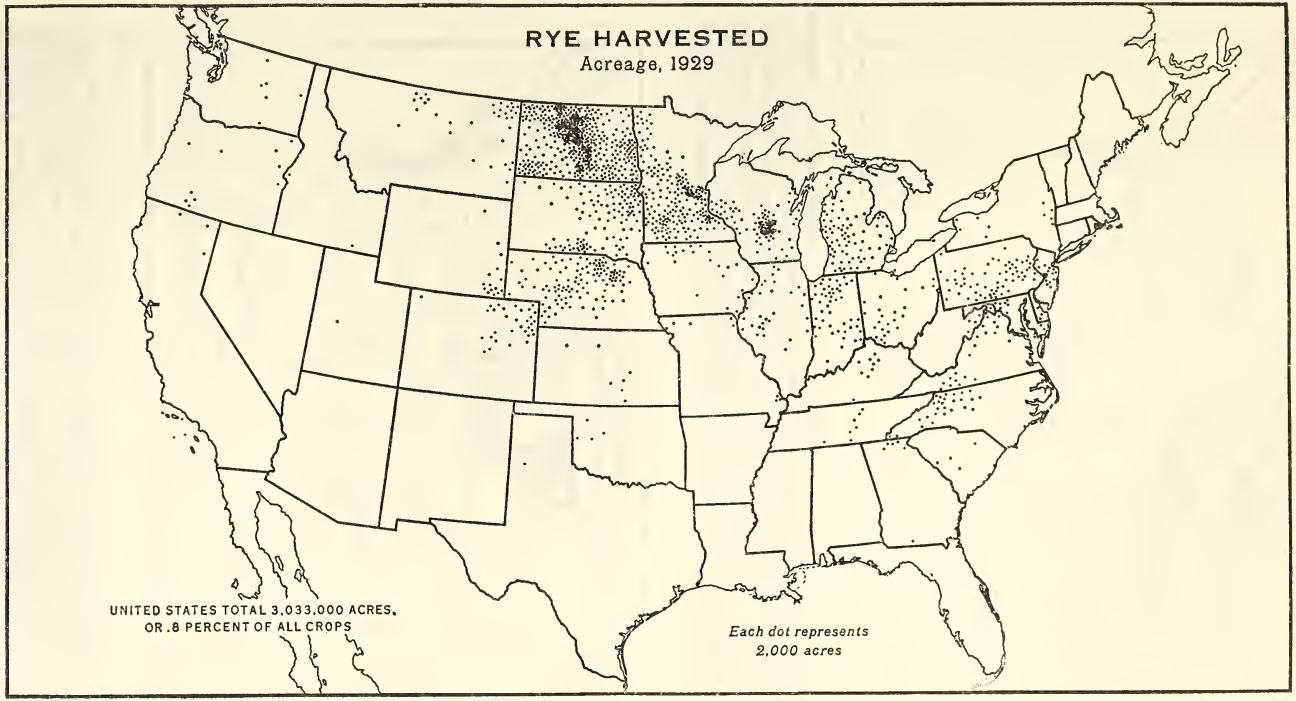


FIGURE 73.—Rye is a crop peculiarly adapted to sandy or depleted soils. Before the World War it was grown principally in the sandy sections of Michigan, Wisconsin, and Minnesota, with a smaller acreage on rather poor soils in Pennsylvania, New Jersey, and eastern New York. Stimulated by high prices, production increased rapidly during the war in the Spring Wheat Belt, until by 1919 one-third of the Nation's acreage was found in North Dakota. The production of rye in western Nebraska and eastern Colorado shows that it is a very drought-resistant crop. Before the depression and the great droughts the rye crop, like the wheat and barley crops, was shifting toward the Great Plains.

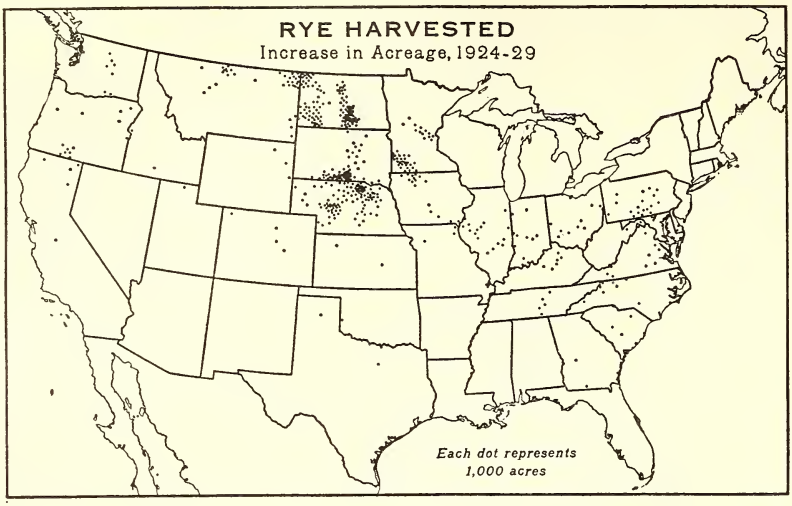


FIGURE 74.—The increase in rye acreage between 1924 and 1929 occurred largely in the semiarid part of the Great Plains from central Nebraska northward to northwestern North Dakota. This was in line with the general trend of the production of rye, for 25 years, to move into the Great Plains and across the Plains into the drier portion. Local increases occurred also in the States from Illinois to Delaware. Rye was formerly a more important crop on the poor soils of the East.

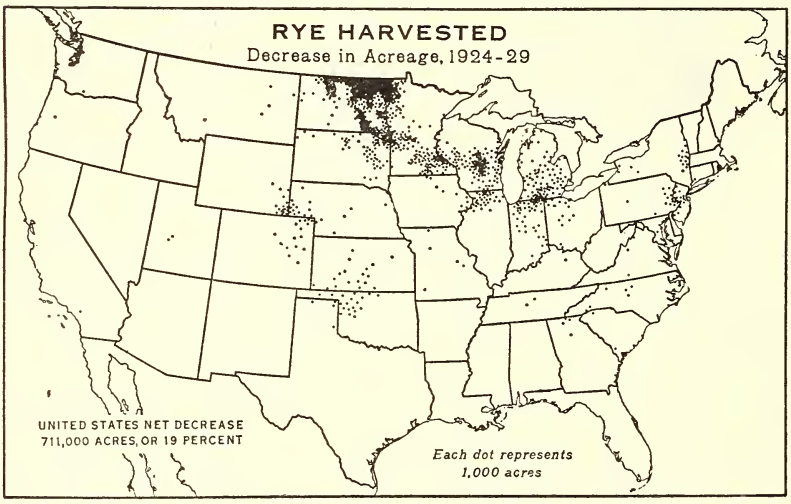
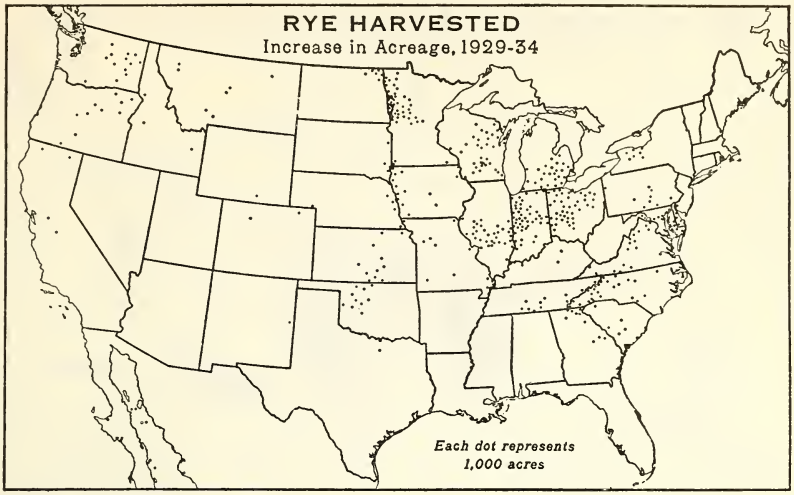
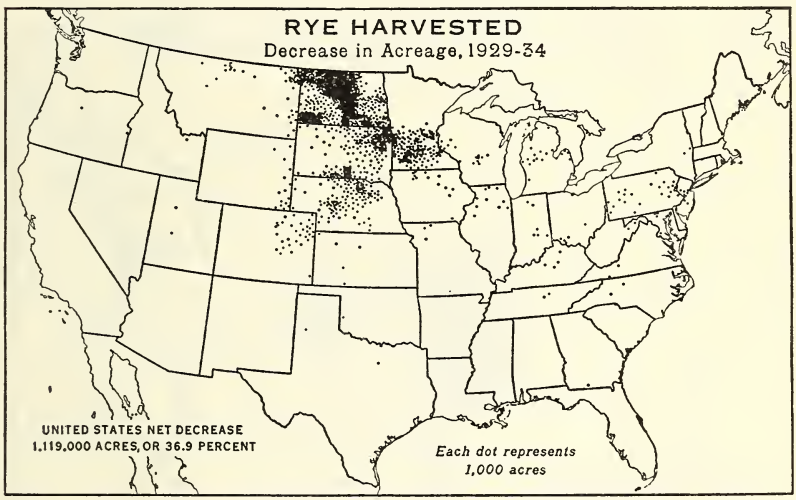


FIGURE 75.—The 1929 season was not favorable for grain. The early summer was marked by undue dryness, especially in the northern and northwestern grain territory. This map shows in part the effect of the poor season upon rye acreage, notably in North Dakota and eastward to Michigan. It is probable also that there was a trend toward smaller acreage of rye during the preceding 5-year period—a reaction from the wartime expansion. A much smaller decrease in acreage occurred in parts of the Hard Winter Wheat Belt.



BAE 31171

FIGURE 76.—The repeal of the prohibition amendment in 1933 may have induced some of the local increases in rye acreage between 1929 and 1934. As shown on this map, areas of larger rye acreage were scattered throughout the eastern half of the country. Northwestern Minnesota showed a substantial increase, and a lesser increase occurred in Wisconsin, south-central Illinois, Indiana, Ohio, southern Michigan, Virginia, and western North Carolina. The repeal presumably reopened a market for rye.



BAE 31172

FIGURE 77.—With rye, as with other small grains, the decrease in acreage in 1934, as compared with 1929, was the result largely of the severe drought of 1934, especially the very large decrease in acreage in the spring wheat territory. The net decrease in rye acreage in the United States during this period amounted to more than a million acres, or approximately 37 percent.

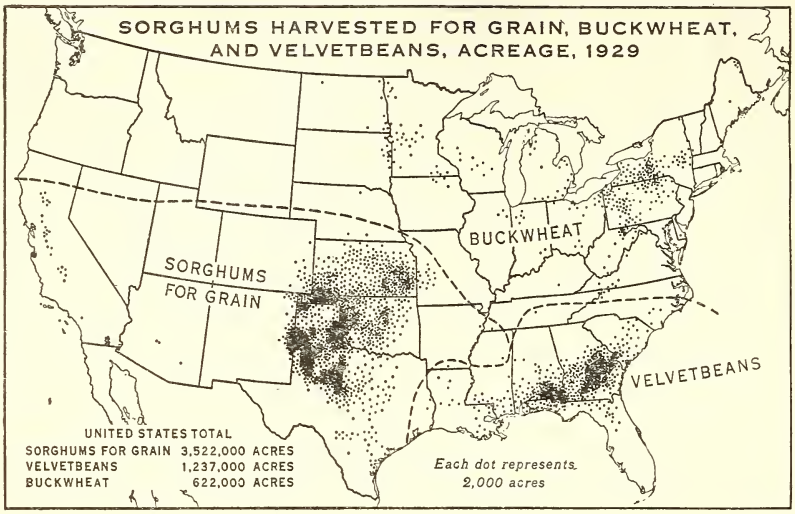


FIGURE 78.—The sorghums are harvested largely for grain in the sorghum area proper, which includes southern Kansas, western Oklahoma, and northwestern Texas, together with a few adjacent counties in the Staked Plains part of New Mexico. The small acreage in California is grown mostly for grain. Production of buckwheat is confined practically to the Appalachian area and the Lakes States. Buckwheat is peculiarly adapted to districts having cool, moist summers and acid soils. Velvetbeans have spread rapidly in the lower Coastal Plain of the Southeastern States. The largest acreage is in Georgia.

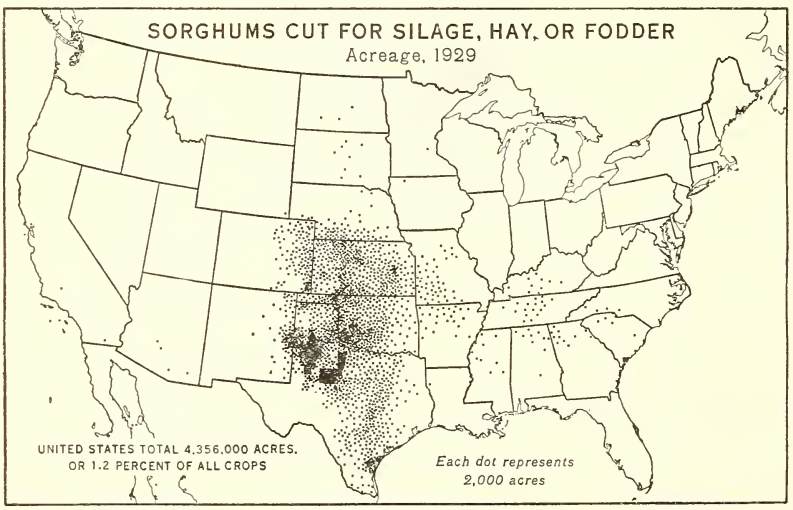


FIGURE 79.—The sorghums are grown for forage over a considerably wider area than sorghums for grain—even as far north as North Dakota and eastward to the Carolinas, also westward into the drier lands of New Mexico and Colorado. Sorgo, or sweet sorghum, which is not commonly grown for grain, is used for forage in the Cotton Belt and northward into Kentucky and Missouri. The sorghums yield a heavier tonnage per acre as a forage crop than does corn in the areas where both crops are grown.

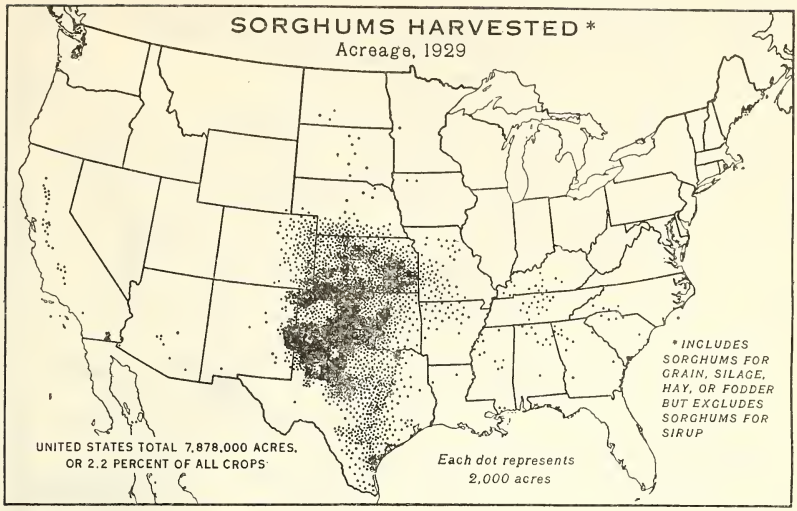


FIGURE 80.—The grain sorghums are, perhaps, our most drought-resistant crops. The expansion of acreage in the southern Great Plains during the first two decades of the century was extraordinary. From 1899 to 1909 the acreage in the United States increased sixfold, and between 1909 and 1919 it more than doubled. The sorghums have now an established place in the farming of the southern Great Plains, where the dry climate is too severe for corn production and the hot winds interfere with pollination and often wither the corn crop.

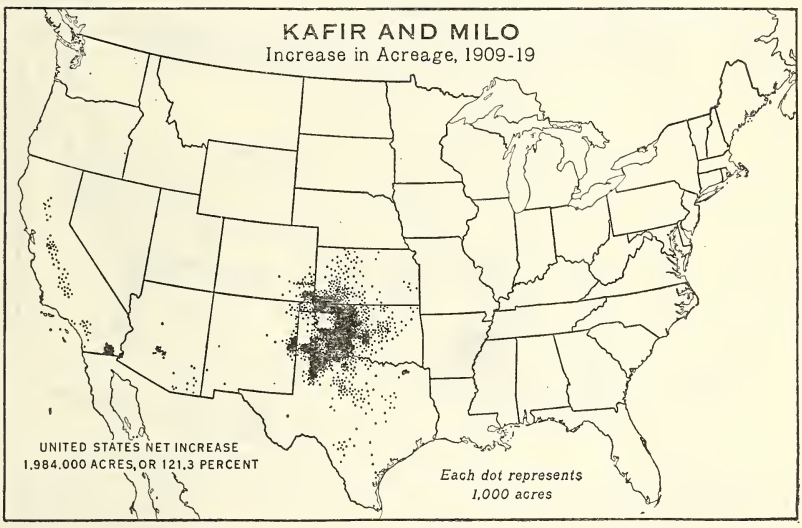


FIGURE 81.—An increase between the acreage of "kafir and milo" in 1909 and that of "kafir, milo, feterita, and durra" in 1919 occurred in nearly every county in the Great Plains south of Nebraska, and in southern Arizona and the valleys of California. It is probable that most of the small acreage of feterita and durra in 1909 was included with kafir and milo. Presumably also this increase occurred in the sorghums cut for grain, as the 1909 census inquiries connected acreage with bushels harvested, and the 1919 census contained a separate question on the sorghums cut for forage.

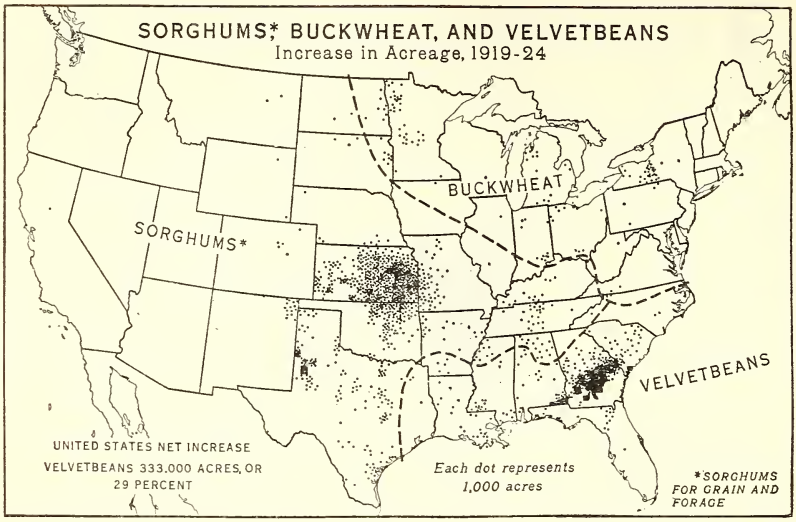


FIGURE 82.—A notable increase in the acreage of sorghums took place in the eastern, more humid half of Kansas and the adjacent section of Oklahoma between 1919 and 1924. A smaller increase occurred in the recently settled counties of western Texas. Acreage of buckwheat increased in Minnesota and the eastern portions of the Dakotas, where buckwheat was practically a new crop, and in several counties in New York, Ohio, Indiana, and Michigan. Velvetbean acreage increased notably in the middle Coastal Plain of Georgia, and the crop advanced into the Piedmont.

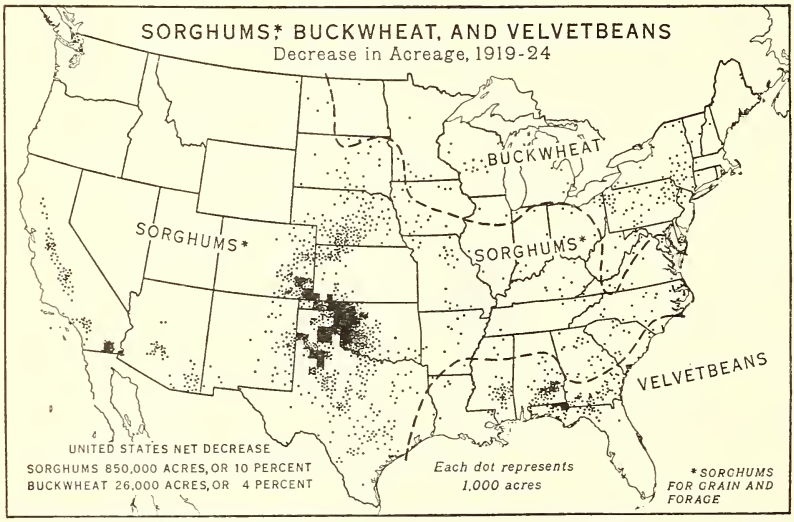


FIGURE 83.—The acreage of the sorghums decreased greatly in western Oklahoma between 1919 and 1924 and in a number of counties in northwest Texas. The decrease was even greater relatively in California and Arizona. Acreage of buckwheat decreased in most of New York and Pennsylvania, and in Wisconsin. Before 1918 the national acreage in buckwheat had remained almost stationary for 50 years. The acreage of velvetbeans decreased in northern Florida and in parts of Alabama, Mississippi, and Georgia, but the decrease was small compared with the increase.

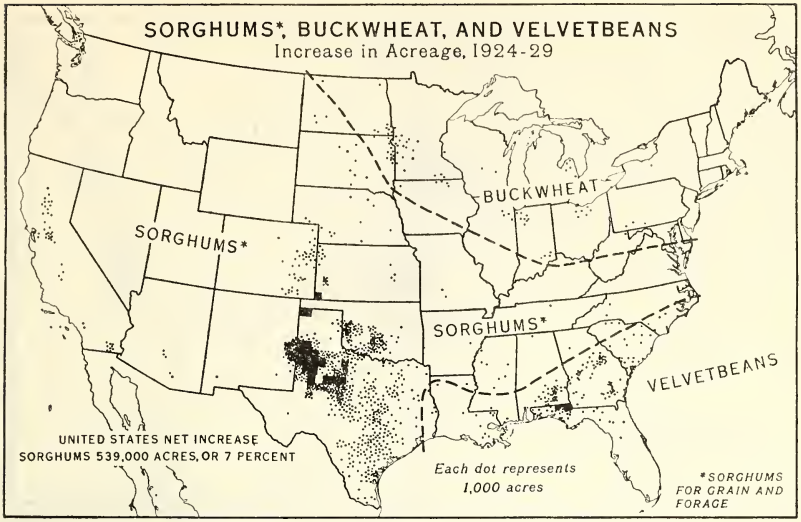


FIGURE 84.—The period from 1924–29 witnessed a substantial increase in the acreage of the sorghums in northwestern Texas. There was also a substantial increase in southwestern Oklahoma and in the Sacramento Valley of California. The increase in buckwheat acreage during this period took place mainly in eastern South Dakota and the adjacent territory in western Minnesota. There were slight increases also in northern Ohio and northwestern Indiana. Velvetbean acreage increased in northwestern Florida and adjacent southeastern Alabama, also in several counties of Georgia and the Carolinas.

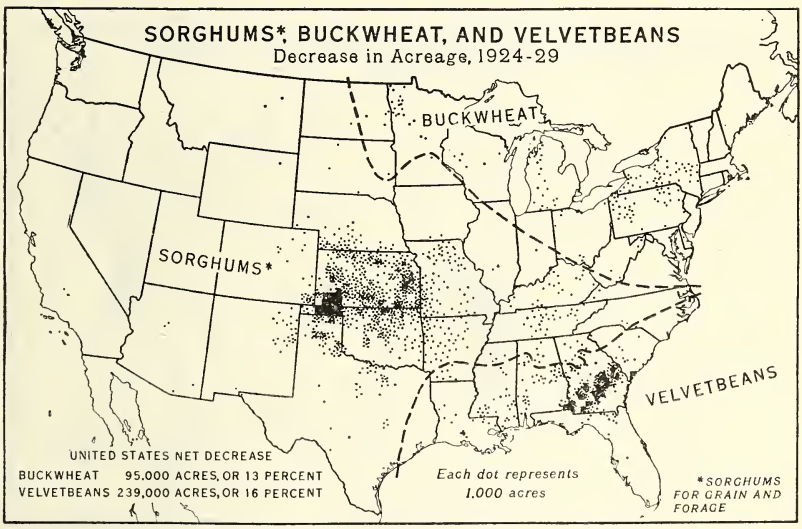


FIGURE 85.—The decrease in acreage of sorghums between 1924 and 1929 occurred chiefly in Kansas and northern Oklahoma. The 1929 season was unfavorable in this area, especially in the Panhandle of Oklahoma, where an area of considerable decrease is shown. Between these years some decrease of buckwheat acreage occurred in New York, Pennsylvania, Michigan, and northwestern Minnesota. This was largely due to the unfavorable season in 1929. The decrease in velvetbean acreage occurred chiefly in Georgia, from the southwestern corner of the State in a broad belt northeastwardly to the Savannah River.

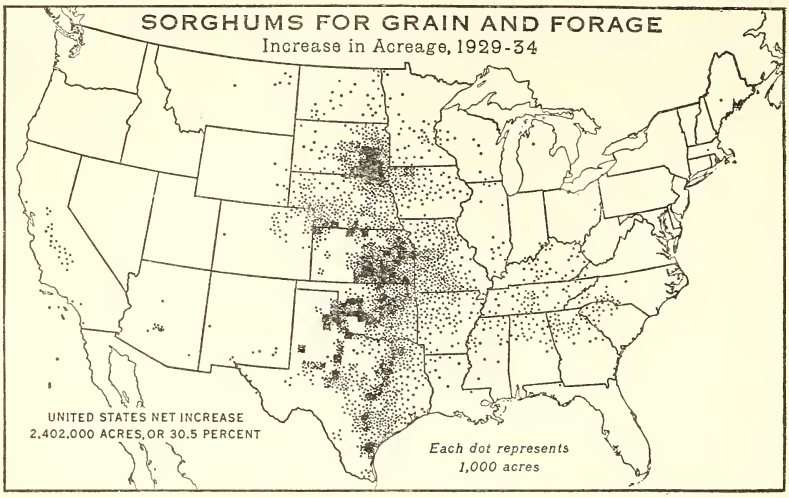


FIGURE 86.—The acreage of sorghums for grain and forage was increased rather than diminished by the Agricultural Adjustment Administration program and the 1934 drought. Large acreages of sorghums were planted in fields shifted from wheat under the adjustment program, but probably a larger acreage replaced corn. Moreover, when the force of the drought began to be felt in the Great Plains in the early summer of 1934, the adjustment regulations were modified to encourage additional plantings of sorghums to counteract the expected failure of other feed and forage crops.

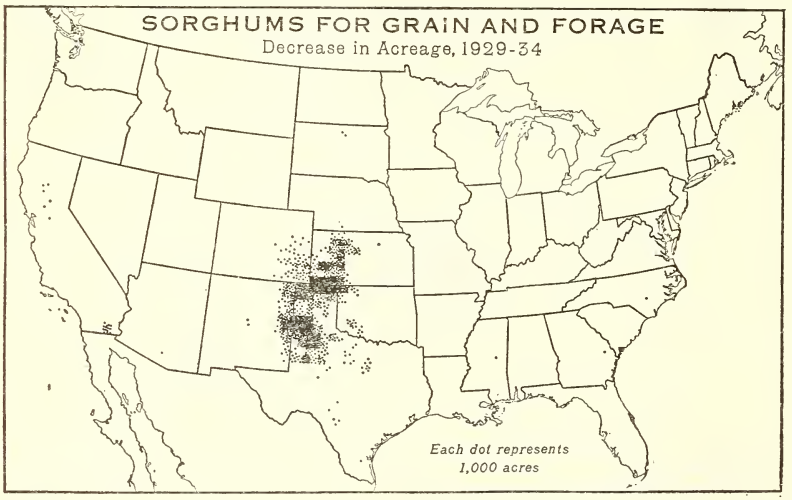
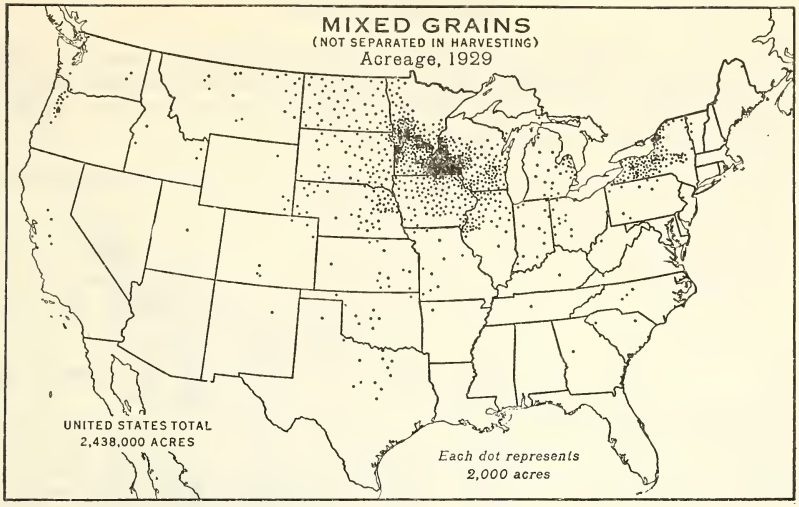
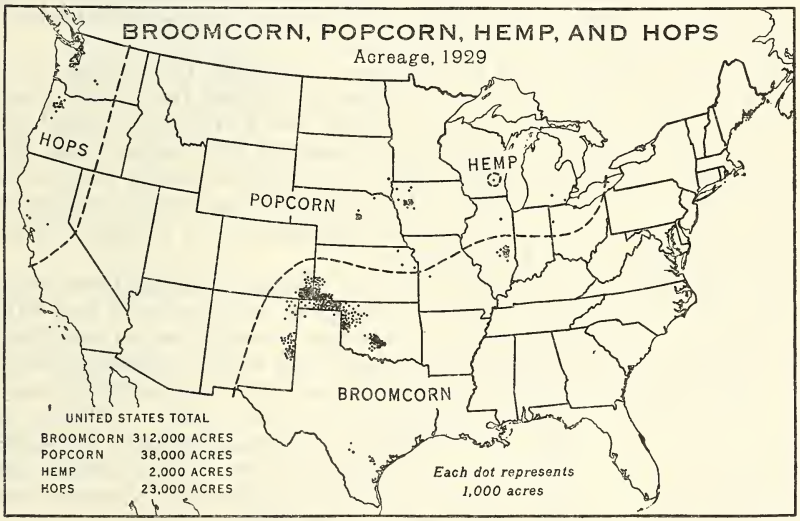


FIGURE 87.—The decrease in acreage of sorghums between 1929 and 1934 occurred almost entirely in the Texas and Oklahoma Panhandle and in western Kansas, southeastern Colorado, and eastern New Mexico. The loss in these areas was occasioned largely by the drought of 1934, which was so severe that no crop was harvested on many farms. In general, sorghum acreage increased notably throughout the Great Plains between these years, and the decrease in the driest section shown on this map was small in comparison.



BAE 31063

FIGURE 88.—Several grains are often sown in combination, more especially for feeding purposes in the dairy and livestock-producing areas. For example, oats and barley are frequently sown and harvested together. Spring wheat is occasionally sown and harvested with oats and sometimes oats and peas are sown and harvested mixed. In the Northeast buckwheat is often added to a combination of one or two of these grains. Winter wheat and rye are sometimes sown together. In the census year 1929 nearly 2½ million acres of grains were harvested in combination in this way.



BAE 31062

FIGURE 89.—This map shows the acreage of certain specialty crops unimportant in American agriculture as a whole but locally of considerable importance. Acreage of hemp is limited almost entirely to southern Wisconsin. Most of the popcorn produced in the country is grown in a few counties of western Iowa and central Nebraska. Hops now are grown chiefly in the Willamette Valley of Oregon and in the Sonoma Valley of California. Broomcorn is botanically a sorghum and is grown mostly in the "dust bowl" area of western Oklahoma and sections of adjacent States, and around Mattoon, Ill.

THE HAY CROPS

The area of crops cut for hay totaled 67,828,000 acres in 1929. Of this acreage the legume hays totaled about 42 percent and the grass hays 58 percent. The changes in the acreage and acre yield of the principal hay crops are shown in table 1.

TABLE 1.—*Hay; Acreage harvested and yield per acre, United States, 1899, 1909, 1919, and 1929*

Kind of hay	Acreage harvested				Yield per acre			
	1929	1919	1909	1899	1929	1919	1909	1899
	1,000 acres	*1,000 acres*	*1,000 acres*	*1,000 acres*	*Tons*	*Tons*	*Tons*	*Tons*
Alfalfa	11,516	8,625	4,707	2,094	2.04	2.19	2.52	2.49
Red, alsike, and mammoth clovers	4,203	3,161	2,443	4,104	1.48	1.31	1.29	1.26
Sweetclover and crimson clover, and lespedeza	1,410				1.14			
Timothy and clover mixed	25,547	19,349	19,542		1.23	1.31	1.27	
Timothy		10,941	14,686			1.17	1.22	
Annual legumes saved for hay	3,068	1,847	4,325	3,884	.96	.93	1.24	1.28
Small grains cut for hay	3,205	5,675			1.07	.96		
Other tame or cultivated grasses	5,362	6,056	5,337	[1] 33,045	.96	1.06	1.07	1.07
Wild, salt, or prairie grasses	13,517	17,126	17,187	15,457	.81	.91	1.07	1.12
Total	67,828	72,780	68,227	58,584	1.26	1.24	1.28	1.22

[1] In 1899 this included timothy alone and timothy and clover mixed.

Practically all the hay is consumed by farm animals. For 1929 it has been estimated by the Bureau of Agricultural Economics that dairy cattle consumed 45 percent of the hay tonnage (not feed value) in the United States, beef cattle 22 percent, horses and mules 30 percent, and sheep (and goats) 3 percent.

The hays constitute the leading crop, measured by acreage, in the Hay and Dairy Belt of the Northeastern States, the North Pacific Hay and Dairy Belt, and in the Grazing and Irrigated Crops Belt of the far Western States. Hay is an important crop in the Corn Belt, in the Corn and Winter Wheat Belt, in the more humid parts of the Hard Winter and Spring Wheat Belts, and in the Pacific Subtropical Crops Belt. As yet it is of slight importance in the Cotton Belt and the Humid Subtropical Crops Belt.

Hay and pasture constitute the most effective means of controlling soil erosion. As the erosion losses become more evident and cattle increase in relative importance, as seems probable when knowledge of the high food values of milk becomes more widely disseminated and the purchasing power of the poor increases, it is reasonable to expect that hay will also increase somewhat in importance. During the recent years of drought and depression the trend toward increasing importance of hay was reversed in Vermont, New York, Pennsylvania, and Wisconsin. On the other hand, in Iowa, Kansas, Nebraska, and the Dakotas hay acreage increased in importance.

As the effects of the drought recede and prices of grain, as compared with prices of milk, become lower in the Hay and Dairy Belt, it appears probable that hay will again increase in importance in that region. At the same time, if the conservation program of the Agricultural Adjustment Administration proves permanent, there will be a tendency to maintain, perhaps to increase, the present acreage of hay in the Corn and Wheat Belts.

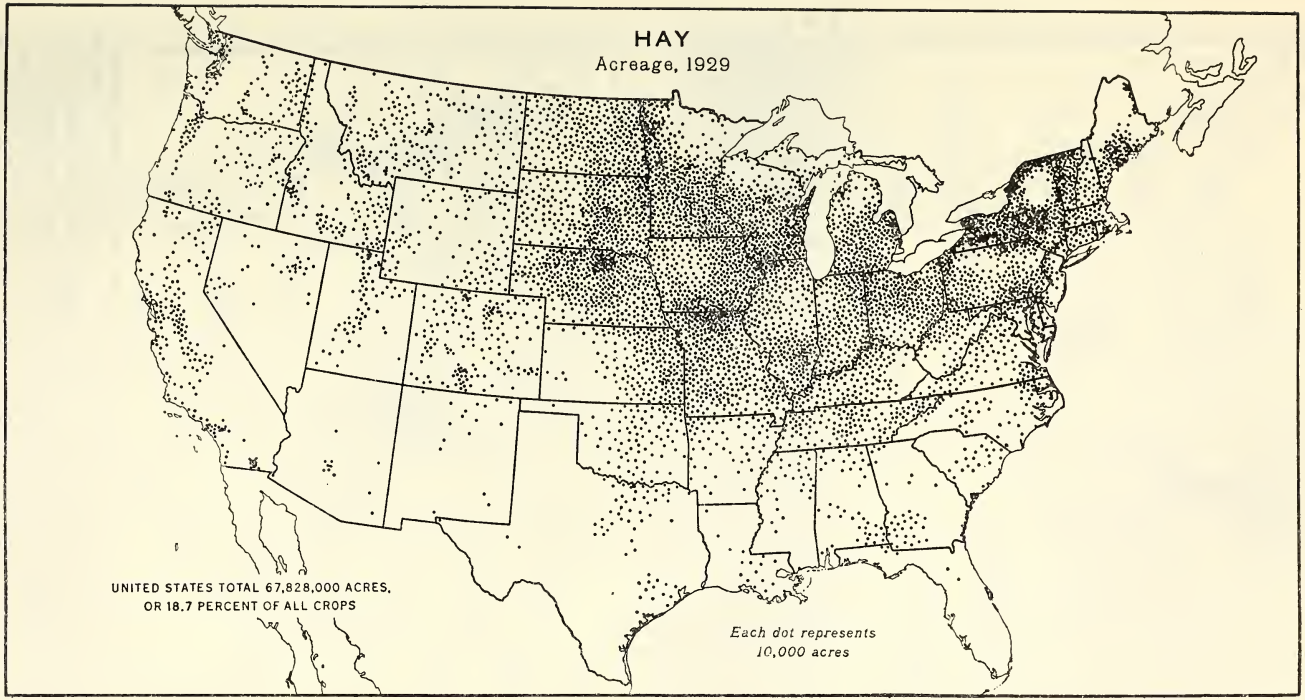
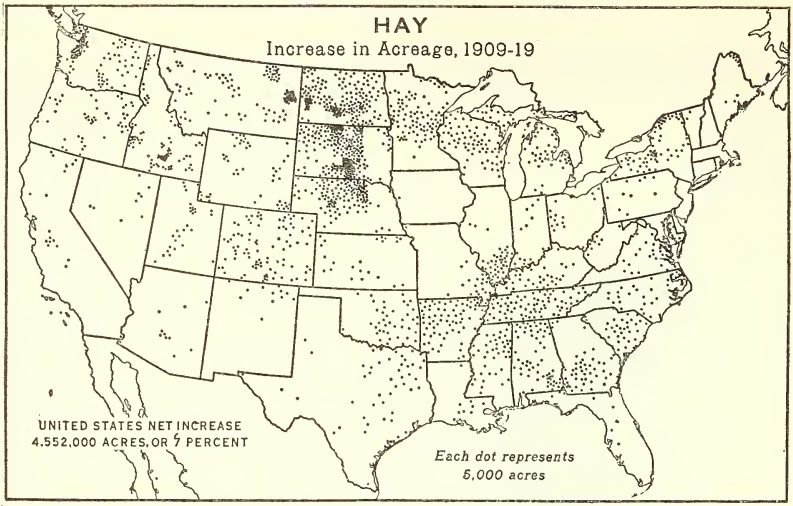
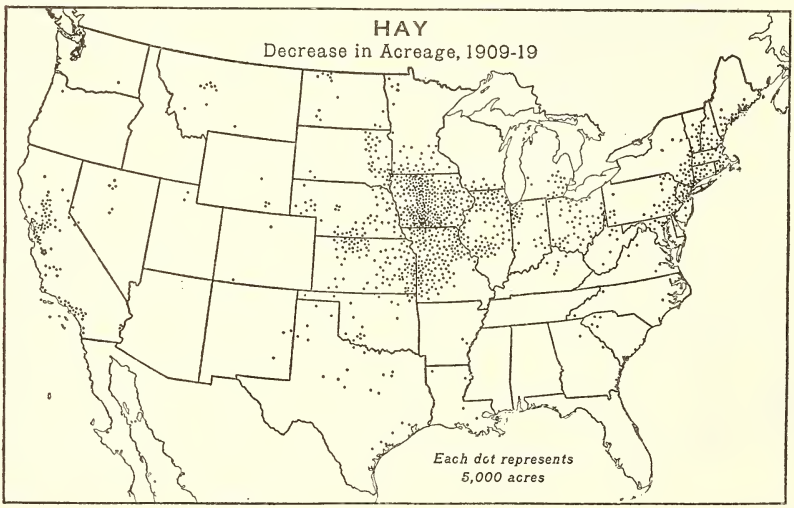


FIGURE 90.—No crop is so widespread as hay in the United States, largely because so many plants with varying climatic requirements are made into hay. A little hay is grown everywhere, but it is relatively an unimportant crop in the Cotton Belt and in the Southwest, except in the irrigated districts. Most of the hay is produced in the Hay and Dairy Belt, in the Corn Belt, particularly around its margins, and in the Corn and Winter Wheat Belt. Timothy and clover, and more recently alfalfa, are the dominant hay crops in these regions. Locally, hay (mostly alfalfa) is very important in the irrigated districts of the West and a considerable quantity is grown in the Spring Wheat Belt.



BAE 29979

FIGURE 91.—The change in hay acreage between 1909 and 1919 was part of a general readjustment of crops during the World War. There was a striking increase in hay acreage (mostly wild) in parts of the Spring Wheat Belt associated with the westward movement of homesteaders and of more diversified farming; and a lesser increase in most of the South and much of the Dairy Belt. The increased acreage in the South consisted of peanut hay, cowpeas, and grain hay, and was part of a movement toward greater self-sufficiency. In the Dairy Belt the trend was from grain toward hay.



BAE 29980

FIGURE 92.—The decrease in acreage of hay between 1909 and 1919 occurred mostly in the Corn Belt, the North Atlantic States, and California. Insofar as this was a development of the period rather than a result of seasonal conditions, it consisted of the substitution of cash crops and more intensive feed crops under the wartime stimulus. Many thousand acres of pasture were devoted to tilled crops during the latter years of the World War, a fact which is evident in some measure in the picture of declining hay acreage shown by this map.

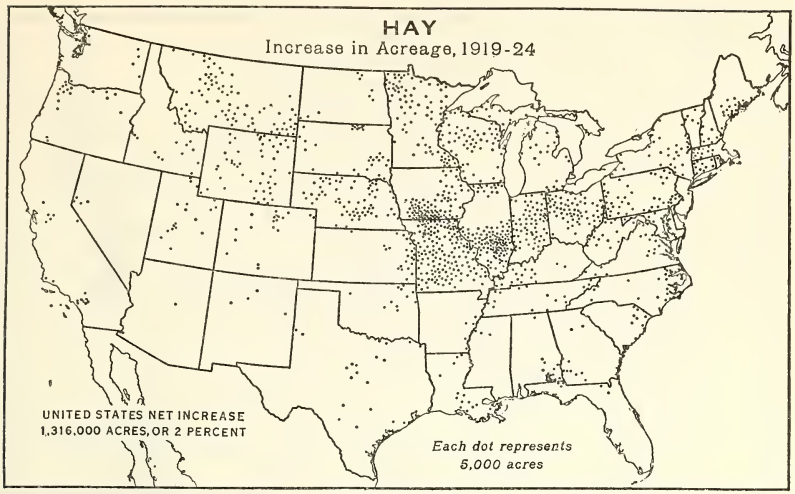


FIGURE 93.—The increase in acreage of hay from 1919 to 1924 is in part a readjustment following the World War. The greatest increase was in the southern part of the Corn Belt from southern Iowa and Missouri eastward through Ohio. Large areas of land throughout this territory which had been taken out of grass and put into grain during the war were again seeded down to hay. The tendency in New England and in the Northwest (Wyoming and Montana) was to build up reserves of feed again, in line with an increasing number of livestock.

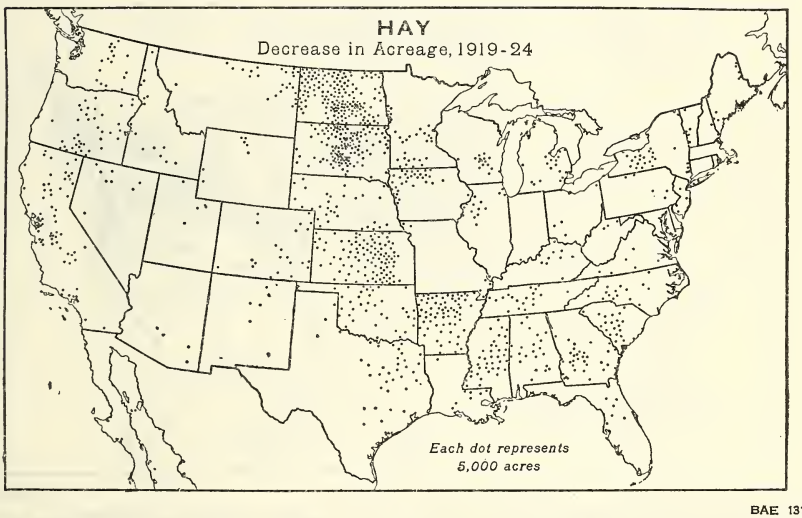


FIGURE 94.—The decrease in hay acreage between 1919 and 1924 was largest in the Great Plains. In the Dakotas this was probably due to the plowing up of the native hay meadows for grain production; in Kansas a series of bad seasons for alfalfa may be the chief reason. Smaller decreases, but relatively as important, will be noted in the Southern States and Pacific Coast States. In the Pacific Coast States there is less grain hay and more alfalfa. As alfalfa is more productive, the production per acre has increased.

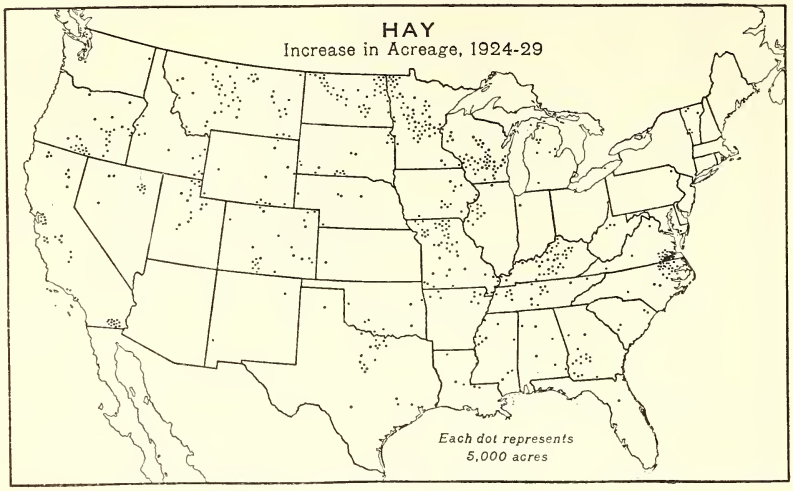


FIGURE 95.—Between 1924 and 1929 the acreage of hay was decreasing in general. The increases were local—mostly in Wisconsin, Minnesota, Montana and irrigated districts in the West, in Missouri, Kentucky, Tennessee, and, notably, in the peanut district of southeastern Virginia and adjacent North Carolina. The increases in the Northwest and far West were mostly of alfalfa and wild hay; in parts of the South the increase was presumably in peanut hay.

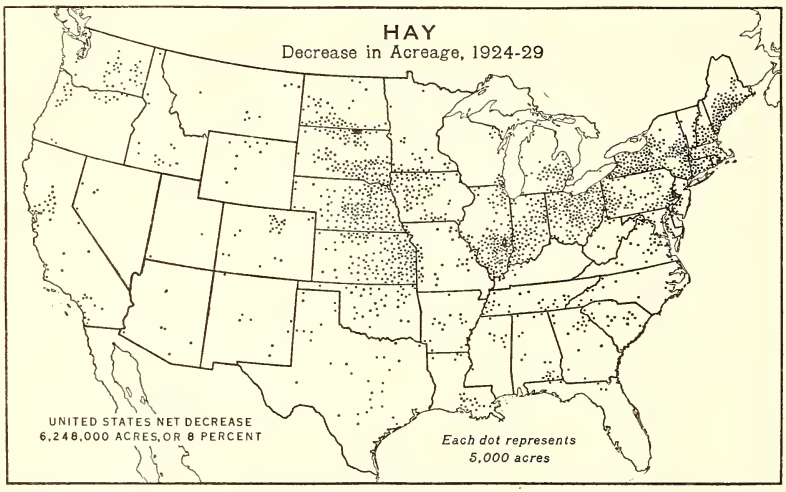


FIGURE 96.—The decrease in acreage of hay between 1924 and 1929 was widespread. In the belt from New England to southern Illinois the crop acreage as a whole was declining. In most of the Great Plains and as far east as Iowa the trend was from hay toward grain, particularly corn and wheat. In the South and Southwest increases in acreage about balanced decreases. For the country as a whole the net decrease in hay acreage in this period was over 6 million acres, or 8 percent of the 1924 acreage.

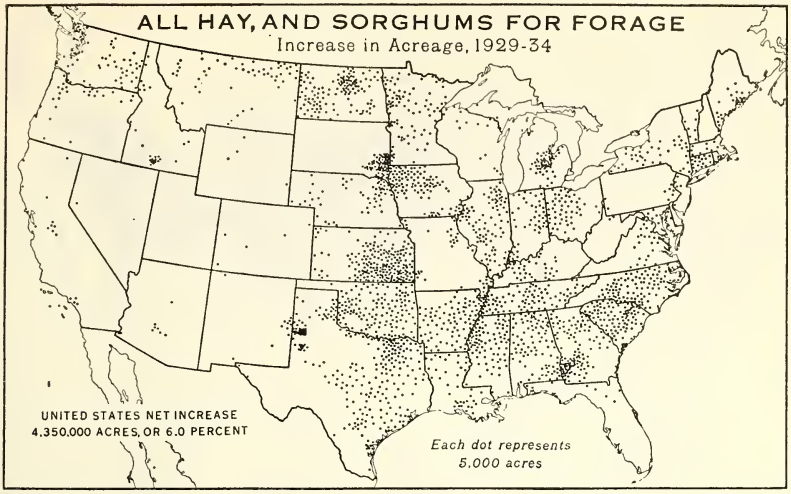


FIGURE 97.—The year 1934 was one of severe drought from Ohio westward. As the drought developed, farmers made a special effort to harvest as large an acreage of hay and forage crops as they could. In addition the agricultural adjustment program, which had been started in 1933, tended toward reduction in acreages of cotton, corn, and wheat. As a consequence of these influences the 1934 acreage of hay and of sorghums cut for forage (associated with hay in the 1934 statistics) showed a widespread increase in the country east of the Rockies.

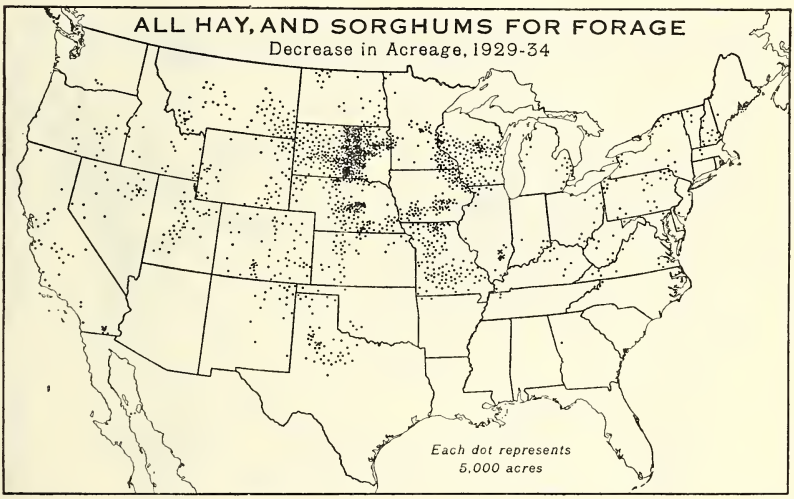
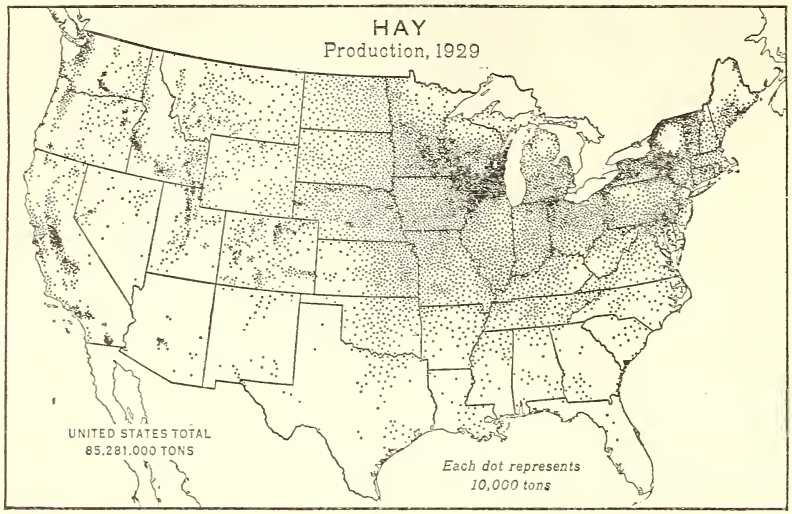
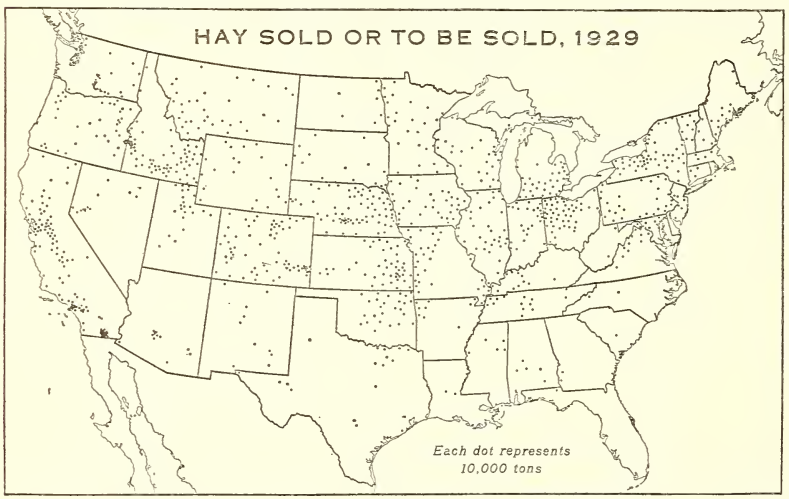


FIGURE 98.—A notable decrease in acreage of hay between 1929 and 1934 occurred in South Dakota and much of Nebraska, in Missouri and southern Iowa, in Wisconsin and adjacent sections of Iowa and Minnesota. As a result of the severe drought in these areas grass was too short to cut for hay. There were also scattered decreases throughout the Rocky Mountain States and in the Northeast where the drought was also severe. The decrease in acreage of hay cut in northwestern Texas exceeded in many counties the increase in acreage of sorghums for forage.



BAE 29965

FIGURE 99.—The hay crop of 1929 was about normal in the United States as a whole. However, the 1929 season was dry in many parts of the Great Plains, resulting in a lighter-than-normal density in this region. Acre-yields were high in the Dairy Belt and the Corn Belt. The heaviest tonnage was produced in the Dairy Belt, notably Minnesota, Wisconsin, New York, and Vermont. There are also areas of intensive production, especially of alfalfa, in the irrigated valleys of the far West.



BAE 31112

FIGURE 100.—Hay is primarily a feed crop and is used mainly on the farms where grown. As a cash crop it is of diminishing importance. Nearly everywhere some farms produce a surplus of hay to sell. The former extensive demand for hay was as a feed for horses kept in cities and villages, but this market has dwindled in later years as the number of horses has decreased, Most hay is now bought by dairymen. Sales of hay constituted 12 percent of production in 1909, 14 percent in 1919, and somewhat less in 1929.

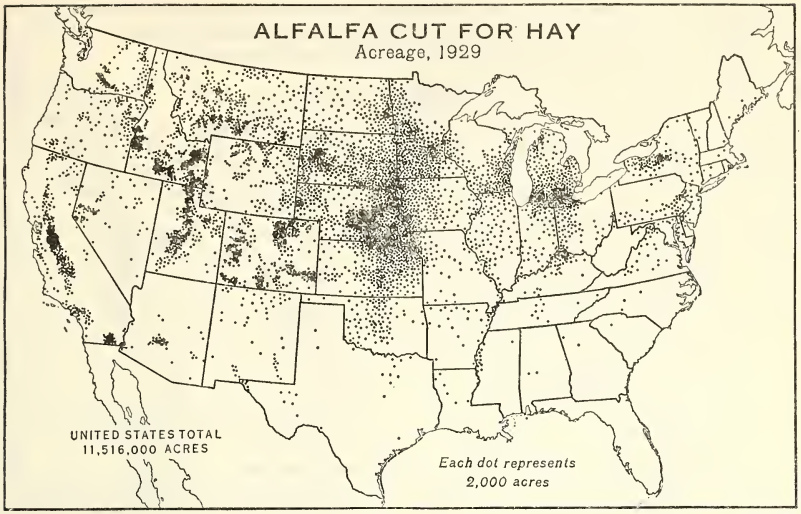


FIGURE 101.—Alfalfa demands soils that are not acid, and it is most easily cured in a climate that is not rainy during the summer. Consequently it thrives best in the arid Western States, where it is grown mostly under irrigation, and in the subhumid parts of the Great Plains. It also does fairly well in the limestone sections of the East, where its culture has been increasing rapidly. Alfalfa is associated with the livestock industries and enters prominently into the farming system of the western cattle country and of the Dairy Belt from Minnesota to New York.

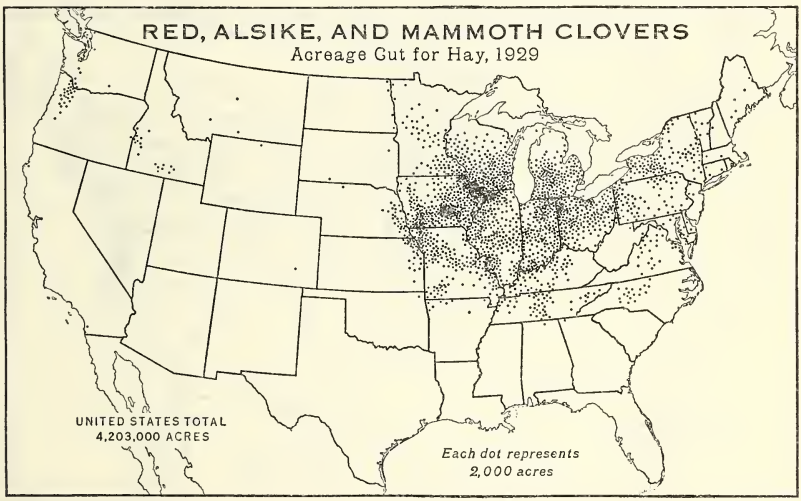


FIGURE 102.—This map shows the acreage of red, including mammoth, and alsike clover grown alone. (For timothy and clover mixed see fig. 106.) Most of the clover acreage is located in the Dairy Belt and the Corn Belt, but only as far west as the two eastern tiers of counties in Kansas and Nebraska, and in the Corn and Winter Wheat Belt to the south, particularly in the Nashville Basin of Tennessee. Much of this clover is grown for seed as well as for hay. There is a small but dense district in western Oregon.

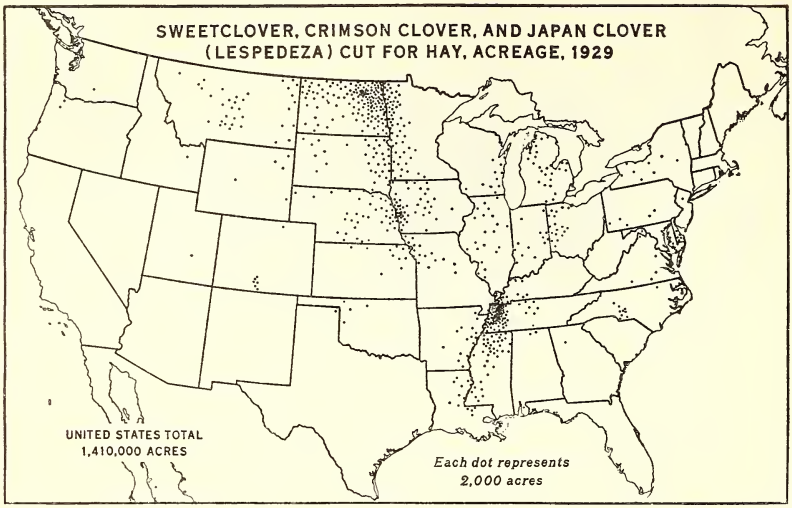


FIGURE 103.—Sweetclover has been a roadside weed in the Corn Belt, and only recently was its value for hay and pasture recognized. It is more resistant to cold and drought than red or alsike clover and takes their places in the northern Plains. It is also increasing rapidly in Illinois, Indiana, and Ohio. Crimson clover is grown principally in Delaware, Maryland, and Virginia. Japan clover, or lespedeza, is increasing rapidly on the acid soils of the South, but is used more for pasture than for hay. It is used for hay mostly in Tennessee, Mississippi, Arkansas, and Louisiana.

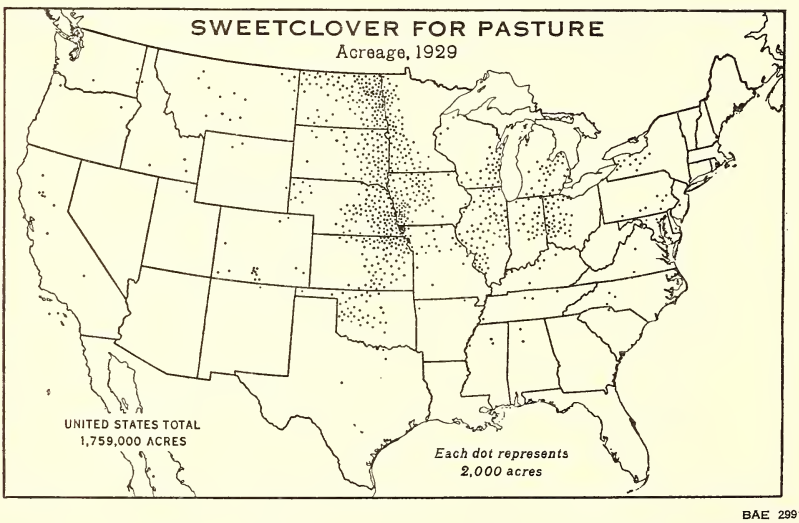


FIGURE 104.—Sweetclover has been advancing throughout the Corn Belt, the Spring Wheat Belt, and the subhumid portion of the Hard Winter Wheat Belt, also in the limestone soil areas of Wisconsin, Michigan, New York, and Pennsylvania. The acreage of sweetclover pasture is more than double that cut for hay. Sweetclover is a plant that tends to retard erosion and add humus and nitrogen to the soil. The increasing use of alfalfa and sweetclover on alkaline or neutral soils, and of the lespedezas on acid soils, constitutes a great agricultural advance.

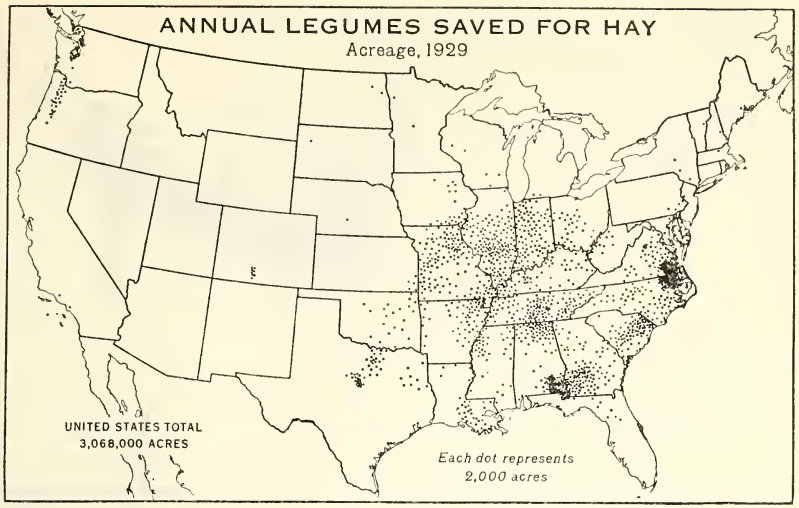


FIGURE 105.—Annual legumes cut for hay include soybeans, cowpeas, and peanuts. Soybeans have been increasing rapidly in importance. The dots shown in the Corn Belt represent soybeans cut for hay. In the South the dots largely represent cowpeas saved mostly for hay, except in southeastern Virginia and northeastern North Carolina, where a large acreage of peanuts is cut for hay and, in North Carolina, soybeans also. Peanut hay is important likewise in southeastern Alabama and adjacent Georgia. The acreage of the annual legumes for hay increased 66 percent between 1919 and 1929.

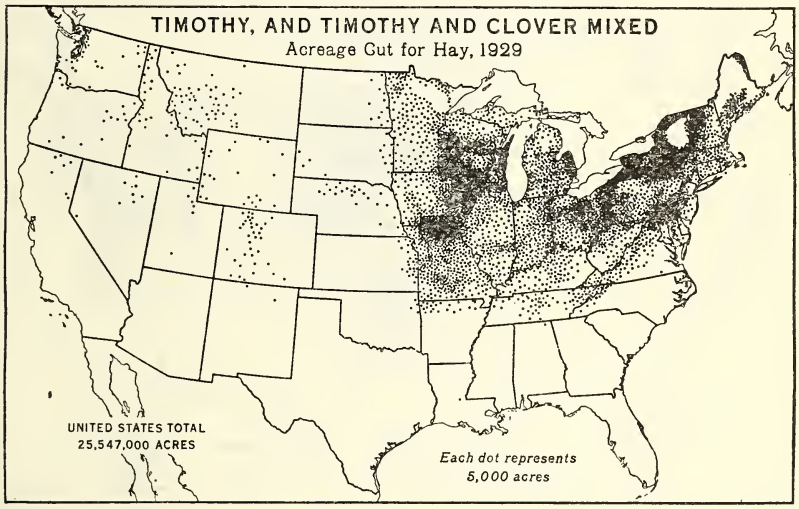


FIGURE 106.—Timothy and red clover are hay crops of the humid North. Neither quite reaches the Cotton Belt, except in a small area south of Cairo, Ill., nor extends much beyond the western borders of Missouri, Iowa, and Minnesota. The climatic range of the two crops is remarkably similar (figs. 102 and 107). Red clover is not so well adapted as timothy to heavy or acid soils. Consequently timothy and clover mixed is found more generally on the better soils—in northern and central New York, southeastern Pennsylvania, southern Michigan, northwestern Illinois, Wisconsin, and Iowa.

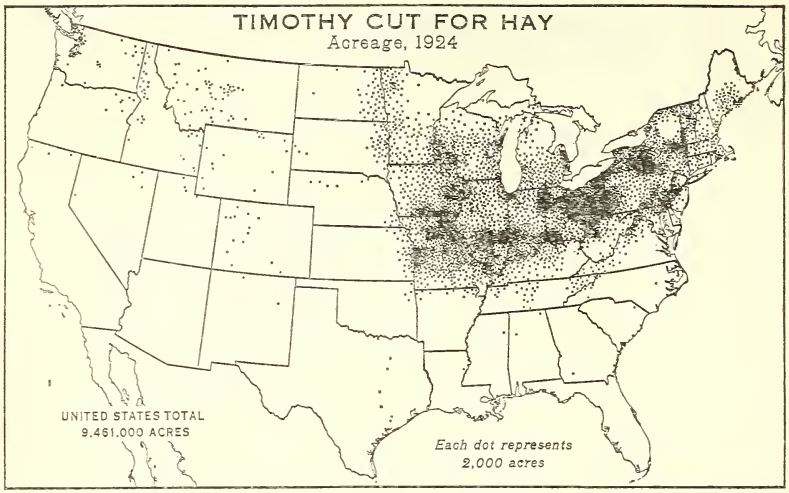


FIGURE 107.—Timothy is often grown alone on the heavier or less fertile soils and mixed with red or alsike clover on the more fertile soils. Timothy and red clover are usually seeded together. Clover is more important the first season, after which it declines and timothy becomes the main crop until the meadow is plowed. About 9,461,000 acres of timothy grown alone were reported in the 1925 census, and 21,112,000 acres of timothy and clover mixed. In the 1929 census these two classes of hay were combined, and 25,547,000 acres reported.

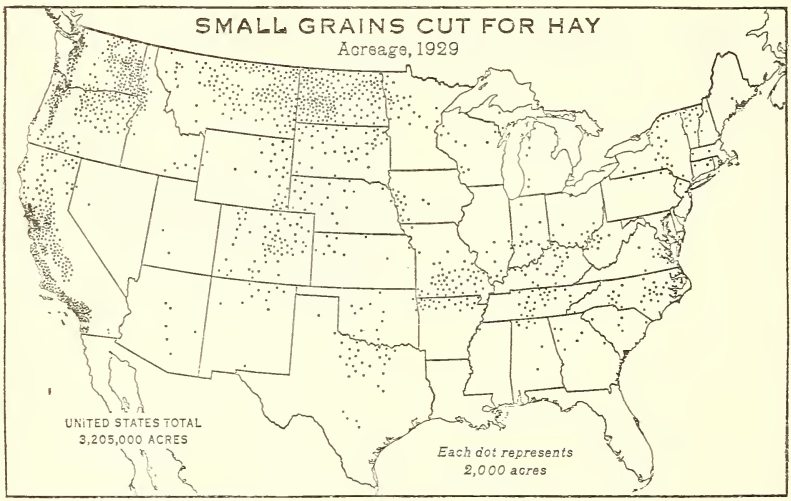
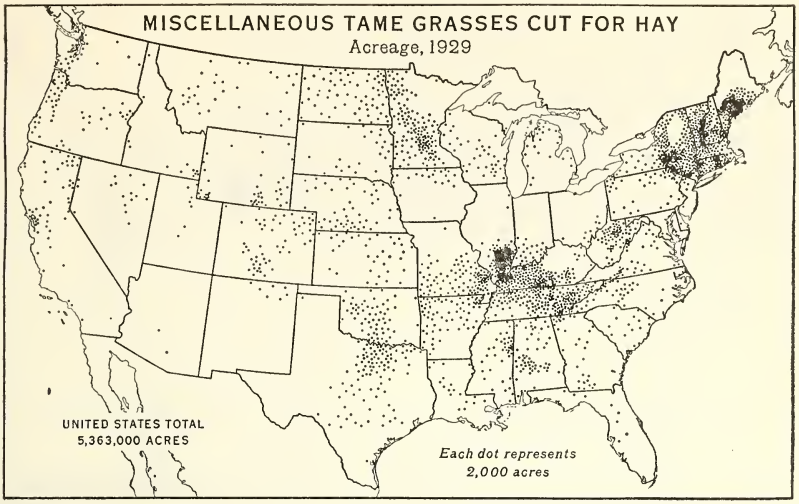
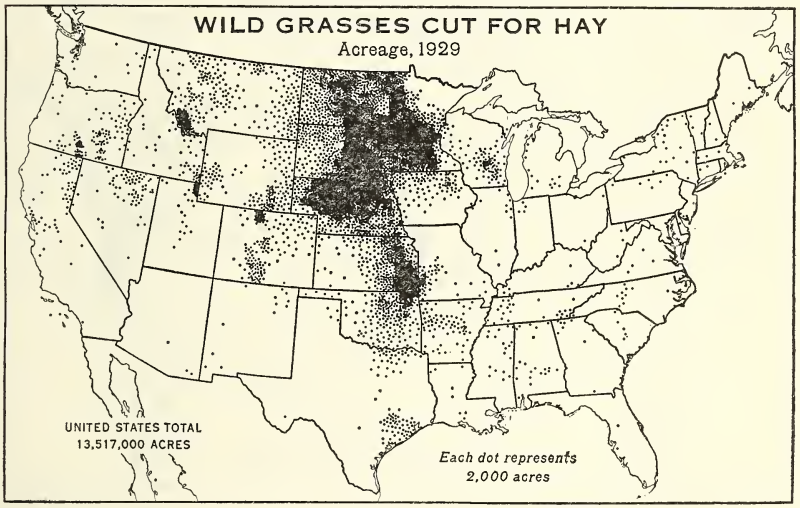


FIGURE 108.—The small grains—barley, oats, wheat, and occasionally rye—are cut green for hay mostly in the Pacific Coast States, where a hay crop is needed that will grow quickly during the cool, moist winters and that need not survive the long summer drought. The large acreage shown in the Dakotas and Montana is mostly wheat. It is smaller in wet seasons than in dry seasons, when part of the crop in this area is scarcely worth threshing. Some oats and wheat are cut for hay in the Corn and Winter Wheat Belt also.



BAE 29905

FIGURE 109.—Included in this map are Bermuda, Johnson, crab, orchard, Sudan, redtop, millet, and other minor grasses. In New England and New York, these grasses are mostly redtop, quackgrass, orchard grass, and Canadian bluegrass. The dense area in southern Illinois is largely redtop. In the Black Prairie of Alabama and throughout the South, the dots represent Bermuda and Johnson grass principally. In eastern Tennessee, orchard grass and tall ryegrass probably constitute most of the acreage. The scattered acreage in the Great Plains is mostly bromegrass, millet, Sudan grass, or amber cane (a small sorghum).



BAE 29906

FIGURE 110.—The acreage of wild or prairie hay is found mostly in the Spring Wheat Belt, the Sand Hills of Nebraska, and in eastern Kansas. East of the Great Plains the moister climate permits the use of more productive timothy and clover, while to the west the climate is so dry that grass does not usually grow high enough to cut, except in the high mountain valleys. The acreage shown in Wisconsin is mostly marsh hay. Wild hay constitutes an important part of the feed supply in the northern Plains, Minnesota, and eastern Kansas.

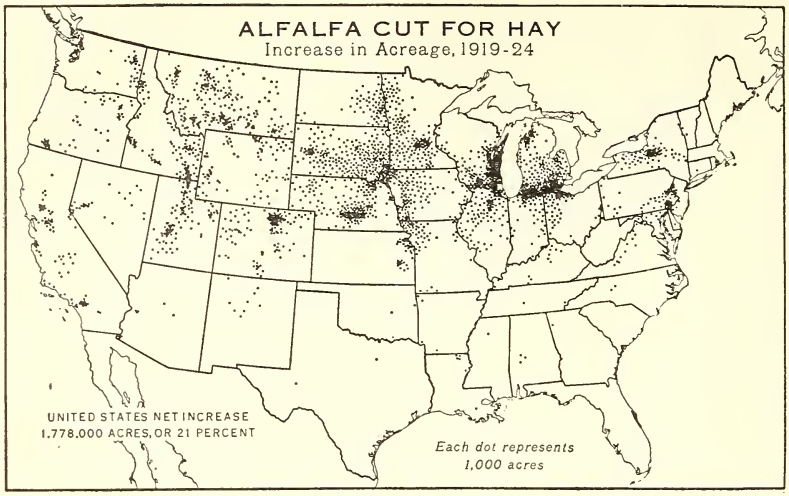


FIGURE 111.—Alfalfa acreage increased between 1919 and 1924 in nearly all the northern half of the United States where the soils are not acid. The increase was notable in southern Michigan and eastern Wisconsin and was general in northern Illinois, the western parts of Iowa and Minnesota, in most of Nebraska, and South Dakota, and throughout the far West, except in a few irrigated districts. Especially noteworthy were the increases in Colorado, Utah, Idaho, and Montana. Alfalfa is not grown along the North Pacific nor Atlantic coasts, where the soils are acid.

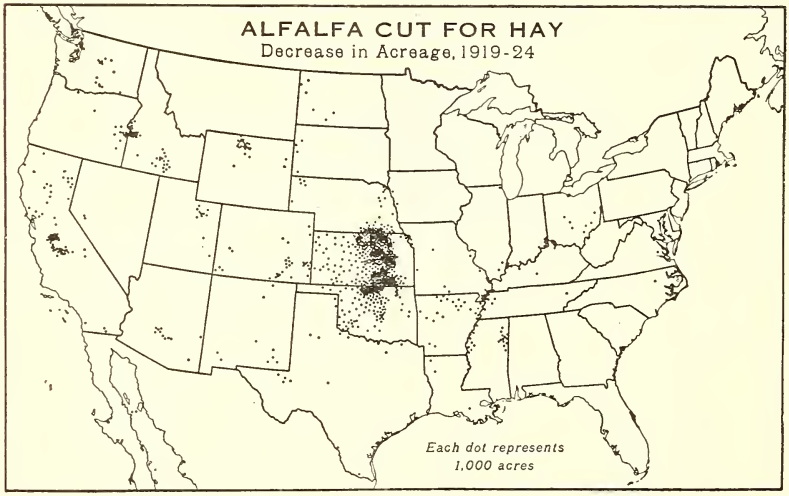
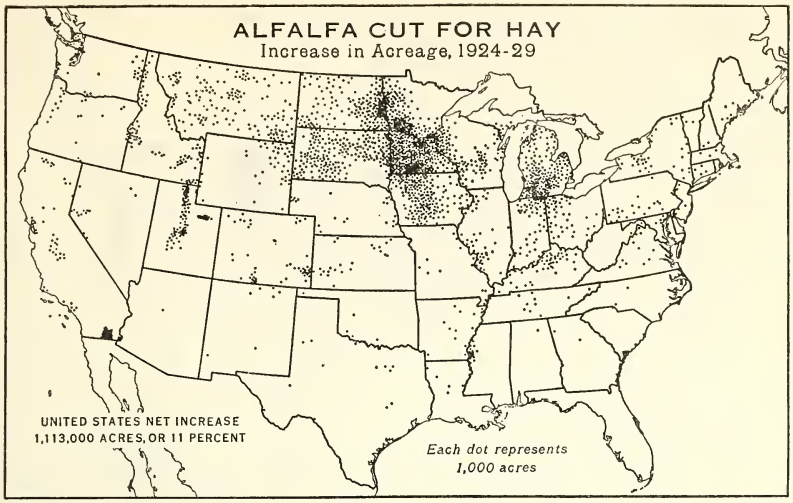
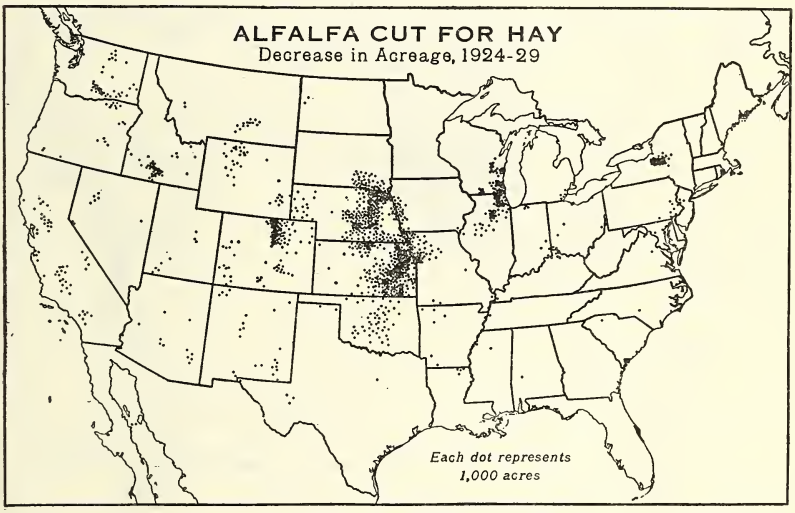


FIGURE 112.—The outstanding decrease in acreage of alfalfa between 1919 and 1924 was in central Kansas and western Oklahoma, where the soil moisture had diminished. A decrease occurred in several areas in the far West, probably associated with deficient water supply for irrigation. More significant probably are the decreases in Mississippi, in Arkansas, and in a number of counties along the Ohio River. In addition to soils that tend toward acidity, the rainfall is heavy in those southern districts and often interferes with the curing of the crop.



BAE 29916

FIGURE 113.—Between 1924 and 1929, alfalfa acreage showed a substantial increase in the Great Lakes and spring wheat States, also in Iowa, Indiana, Ohio, and Kentucky, in Utah, parts of Idaho, and the Imperial Valley of California. Alfalfa has become a feedstuff extensively raised and sold commercially in the East as well as the West, but the proportion sold is larger in the irrigated valleys of the West. The net increase in alfalfa acreage in this 5-year period, which was 11 percent, exceeded 1,100,000 acres.



BAE 29917

FIGURE 114.—The decrease in alfalfa acreage in the period 1924–29 occurred largely in eastern Kansas and Nebraska—in Kansas mostly east of the area of decrease in the preceding 5-year period (fig. 112). Noteworthy decreases occurred also in central New York (possibly a reaction), northeastern Illinois, southeastern Wisconsin, northeastern Colorado, and the Twin Falls district of Idaho. In places this map may be misleading, for a part of the decrease indicated came from an inability to harvest the crop because of unfavorable weather.

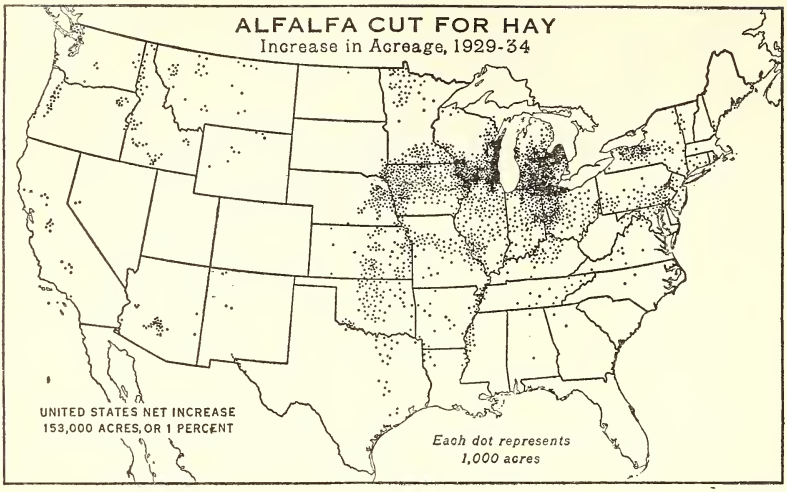


FIGURE 115.—The period 1929–34 was one of readjustment in crop acreage, the general trend being toward a reduction in the more intensively tilled crops in favor of feed crops and grasses. Thus the tendency was toward an increase in alfalfa acreage where the climate permitted. The areas of greatest increase were Michigan and southern Wisconsin. Western New York, the Ohio-Indiana border territory, northern Illinois, and western Iowa also show a substantial increase in acreage. These are areas of soils derived from limestone or loess in which dairying or diversified livestock farming are very important.

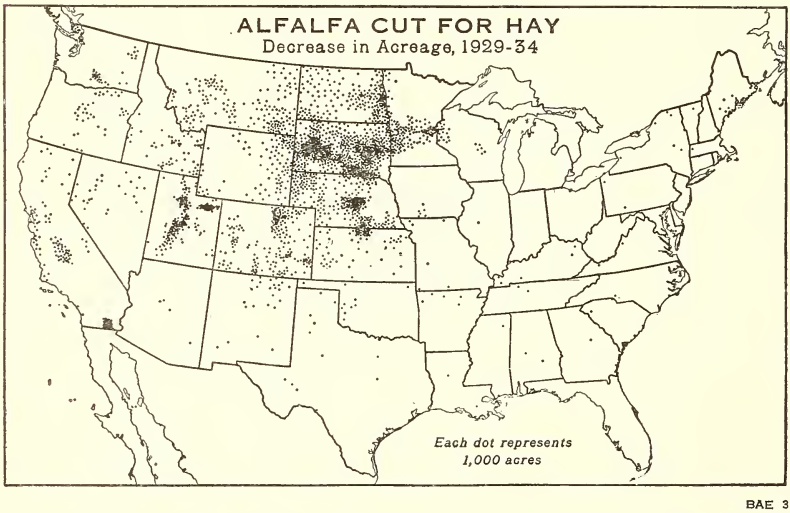


FIGURE 116.—The decrease in alfalfa acreage between 1929 and 1934 occurred mainly in the Great Plains and westward. This was largely caused by the drought in 1934, which destroyed temporarily large acreages of unirrigated hay, as well as of small grain and tilled crops in the Great Plains, and greatly reduced the supply of water for irrigation farther west. The general trend in alfalfa acreage in the Nation as a whole during this period, owing to the agricultural adjustment program and other factors, was toward an increase (fig. 115).

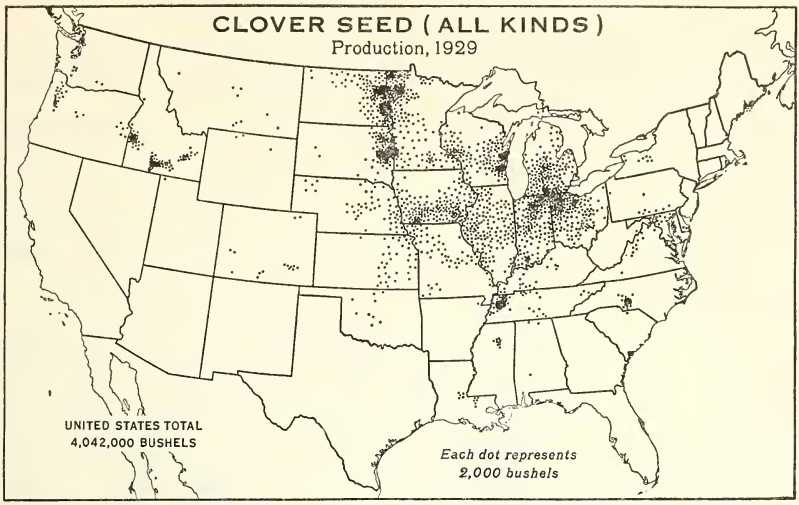


FIGURE 117.—Clover seed is produced where clover thrives and the climate is favorable to the maturing and harvesting of a seed crop. Ordinarily clover fields are cut once for hay early in the season and then the second crop is allowed to mature, after which it is harvested and threshed much as though it were a grain crop. The chief areas of production of the red clovers and sweetclover are the Corn Belt and the Lake States, with the densest production, in 1929, located in the eastern parts of the Dakotas.

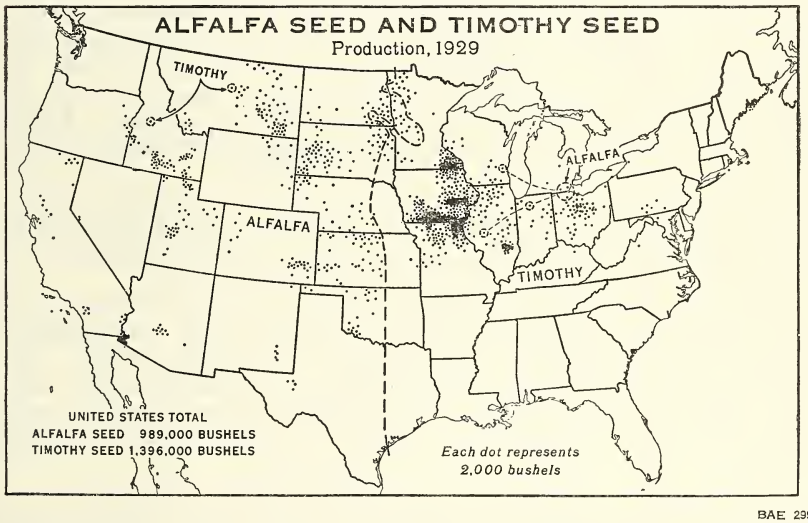


FIGURE 118.—In general, timothy seed is produced in the northeastern quarter of the Nation, and alfalfa seed in the western half. This map indicates some exceptions, timothy seed in the West being grown in high mountain valleys, alfalfa seed in the East in limestone areas. By far the largest territory of timothy seed production is in eastern Iowa and adjacent portions of Minnesota and Missouri. Alfalfa seed is produced more or less generally in the Great Plains and in the irrigated valleys of the Rocky Mountain States and the southwestern desert.

ANNUAL LEGUMES AND SUGAR CROPS

While the acreages of most crops have remained stationary or declined in recent years, those of the annual legumes have increased.

TABLE 2.—*Annual legumes: Acreage, excluding acreage for hay, United States, census years, 1909–34*

Crop	1934		1929		1925	1919	1909
	Grown alone	Grown with other crops	Grown alone	Grown with other crops			
	1,000 acres	*1,000 acres*	*1,000 acres*	*1,000 acres*	*1,000 acres*	*1,000 acres*	*1,000 acres*
Soybeans	5,692	885	1,962	949	----------	113	2
Cowpeas	2,711	2,491	776	718	----------	----------	----------
Peanuts	2,016	1,223	1,559	888	1,105	1,125	870
Velvetbeans	----------	----------	89	1,148	1,476	1,143	----------
Ripe field beans[1]	1,488	15	1,746	120	1,637	1,162	803

[1] Navy, pinto, lima, and other ripe field beans.

In addition, the area of annual legumes cut for hay increased from 1,847,000 acres in 1919 and 3,068,000 acres in 1929 to 9,501,000 acres in 1934. Much of this increase is assignable to the program of the Agricultural Adjustment Administration.

Seeds of the annual legumes are good food for man, and are so used extensively in the Orient; but many are not so used in the United States. Besides beans and peas, peanuts are in common use, and cowpeas to some extent in the South. The annual legumes are excellent feed for livestock, being high in protein and fats and certain of the vitamins and minerals. This is the principal use in the United States. In addition, soybeans are becoming widely used for industrial purposes, including oil for paints, linoleum, and soap. The resulting cake is used for feed, plastics, and human food. Finally, the annual legumes tend to increase the nitrogen and organic content of the soil, improve the tilth, and retard erosion.

Only about 25 percent of the sugar consumed in the United States is produced in the continental United States. About 15 percent of the supply comes from Hawaii, 16 percent from the Philippines, 11 percent from Puerto Rico, and 33 percent from Cuba.

Within the United States beets contribute about 87 percent of the sugar production, sugar cane nearly 13 percent, and maple trees 0.1 percent. More maple sap is made into sirup than into sugar. Juice of the sorghum cane does not crystallize on evaporation, and all of this product is used as sirup. Practically all the sugarcane grown outside southern Louisiana and southern Florida is used to produce sirup.

Three-fourths of the sugar-beet production in the United States is on irrigated land, principally near the Rocky Mountains—along the rivers as they flow out into the Great Plains, and along the rivers that flow westward from the mountains into Great Salt Lake and the Pacific Ocean. Formerly California was one of the leading sugar-beet States and an extensive acreage is still found in the valleys that open onto the cool Pacific coast. The sugar-beet acreage dependent on natural rainfall is located in districts mostly along the northern margin of the Corn Belt.

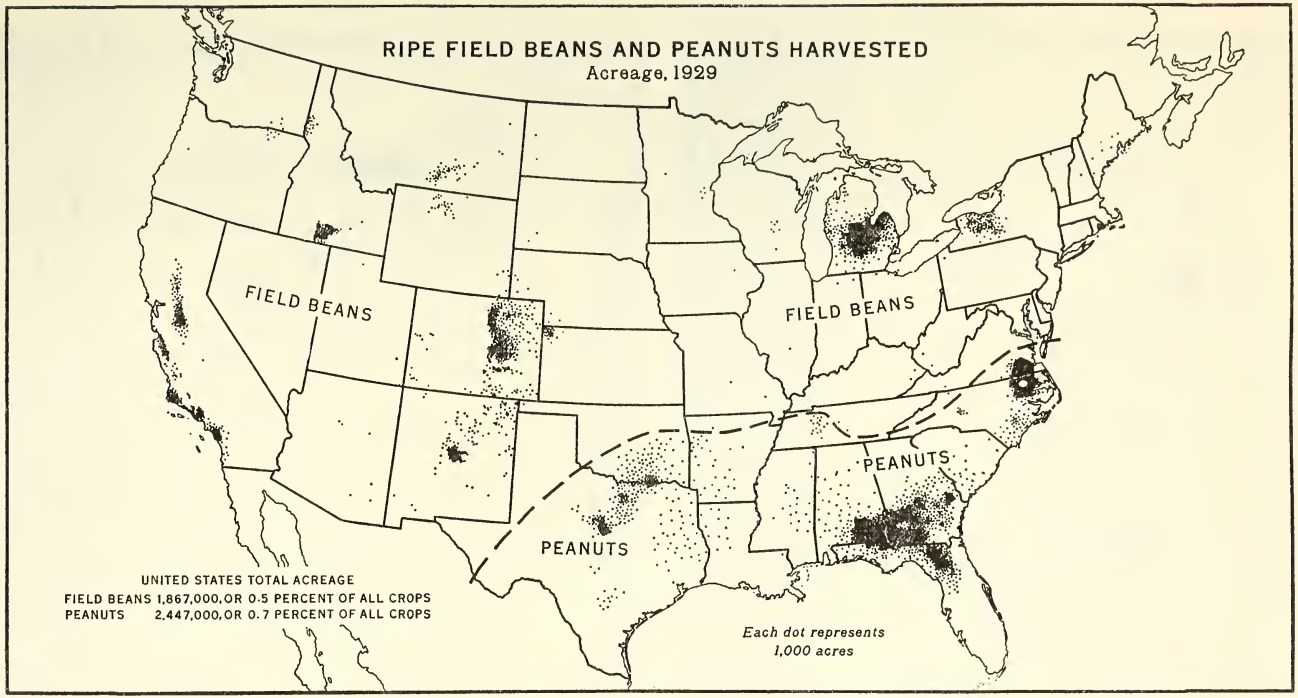
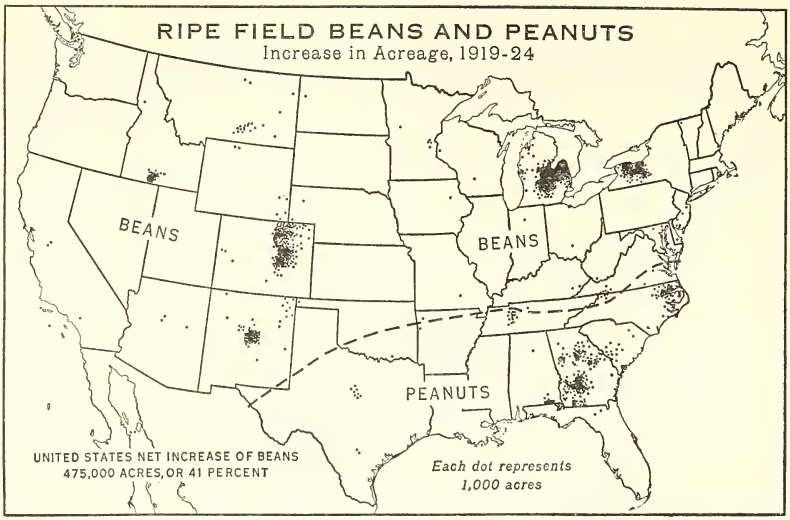
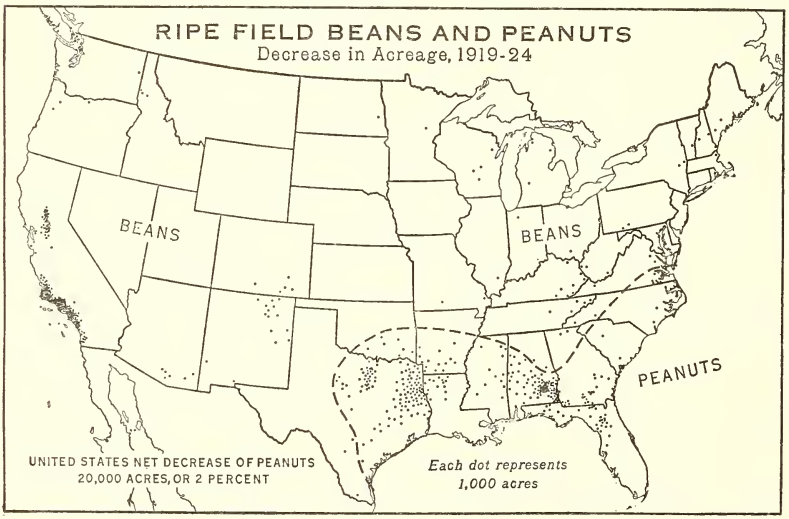


FIGURE 119.—In western New York and central Michigan the leading varieties of field beans are White Pea, Robust, and Wells Red Kidney; on the high plains of eastern New Mexico and Colorado, mostly the native Mexican or pinto bean is grown. In California, practically the entire commercial crop of limas and a part of the crop of white beans and black-eye beans are raised; and in Idaho, Montana, and Wyoming the Great Northern, a white variety, and other varieties are grown. Peanuts for human consumption are grown mostly in the Virginia-North Carolina district between Richmond and Raleigh. Those grown in Georgia, Alabama, and Florida, in Texas and Oklahoma, are the smaller Spanish variety and are mostly fed to hogs or made into peanut butter or oil.



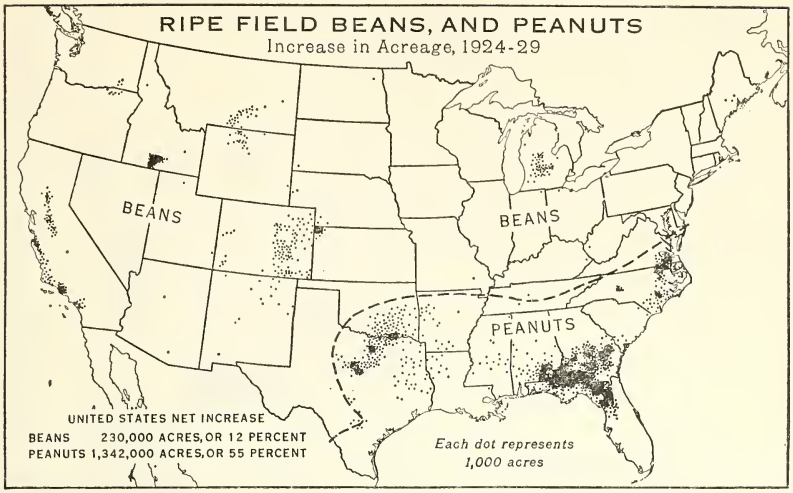
BAE 19277

FIGURE 120.—The acreage of beans increased greatly in western New York, southern Michigan, eastern Colorado, and in the Twin Falls district of Idaho between 1919 and 1924—that is, in four of the five bean districts. The production of beans also was increasing in eastern Montana. For the United States as a whole, the net increase in bean acreage in the period amounted to 41 percent. The production of peanuts in the piedmont of Georgia and in central South Carolina was largely a development of this 5-year period.



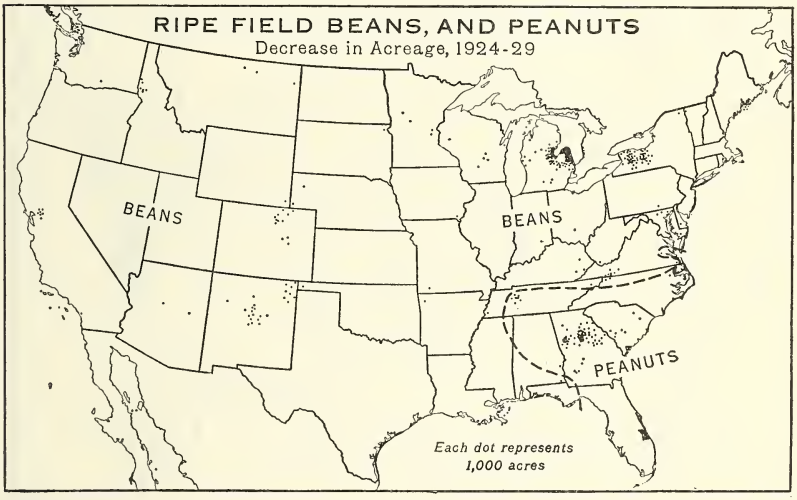
BAE 19446

FIGURE 121.—The acreage of beans decreased notably in California between 1919 and 1924, owing partly to the fact that 1924 was a very dry year. A slight decrease is indicated in certain counties of Arizona, New Mexico, and southern Colorado. Peanut acreage decreased notably in Alabama, Mississippi, Louisiana, and Texas, also in Florida and in several counties in southern Georgia. These decreases slightly overbalanced the increases in Georgia and the Carolinas. The net result for the United States was a decrease of 2 percent.



BAE 29918

FIGURE 122.—In the 5-year period here shown, the acreages of beans and peanuts showed a substantial net increase for the country as a whole. Texas, which had been growing fewer peanuts in 1924 than in the previous census year, showed a return of acreage by 1929, while the Alabama-Georgia-Florida district, as well as the Virginia-North Carolina area recorded a 50-percent increase in acreage. The increase in bean acreage occurred largely in central Michigan, eastern Colorado, Cheyenne County, Kans., California, and Idaho; also in southern Montana, and adjacent Wyoming.



BAE 29919

FIGURE 123.—The only areas of notable decrease in acreage of beans between 1924 and 1929 were in eastern Michigan and western New York. Slight decreases occurred in several counties of New Mexico and Colorado. There was some decrease in the acreage of peanuts in central Georgia. These small areas of decrease were greatly overbalanced, however, by the areas of increase, so that the net effect in the case of both crops was a substantial increase in acreage during this period.

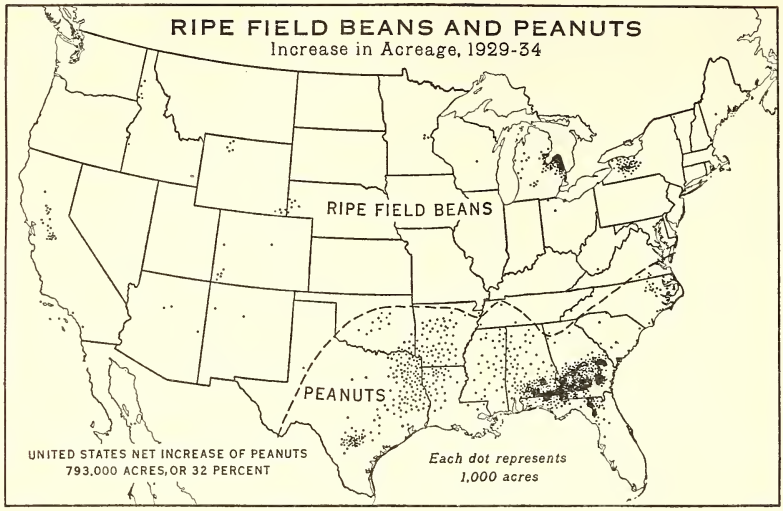


FIGURE 124.—The decrease in acreage of beans in western New York and eastern Michigan between 1924 and 1929 was regained by 1934, and slight increases between 1929 and 1934 occurred in several counties in the far West. The acreage of peanuts continued to expand rapidly in southern Georgia and Alabama. The increase was less rapid in eastern Texas. For the country as a whole the increase was about one-third as compared with over a half during the preceding 5 years.

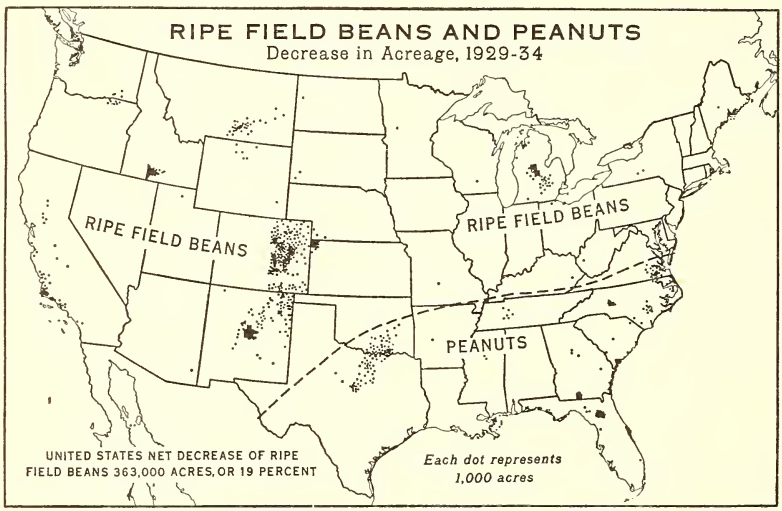
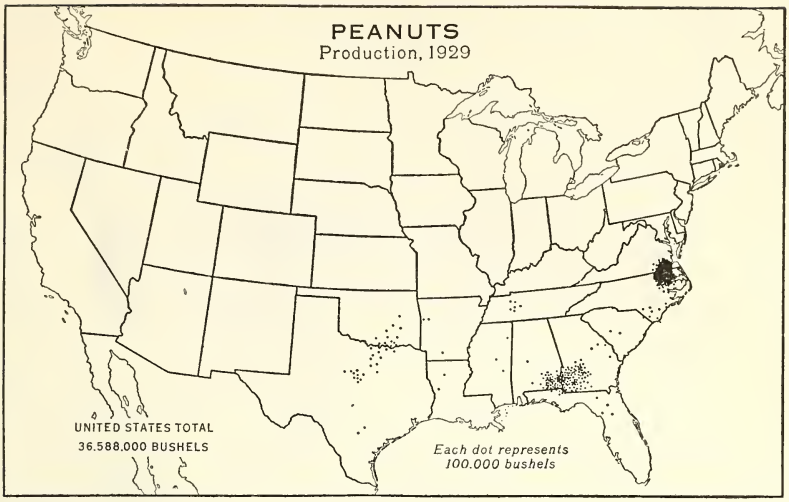
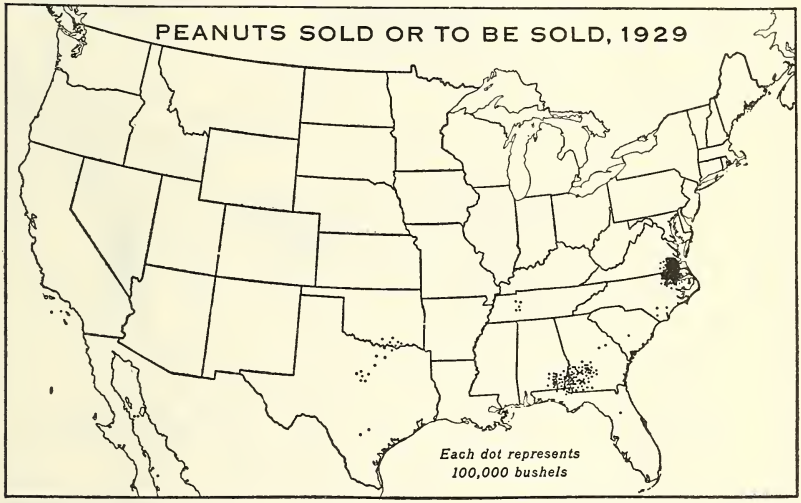


FIGURE 125.—A notable decrease in acreage of pinto beans harvested occurred in the Great Plains between 1929 and 1934, owing undoubtedly to the extreme drought of the latter year. The decrease in southern Idaho probably was assignable in part to limited water for irrigation. The drought doubtless also induced the decline in acreage of peanuts harvested in north-central Texas and adjacent Oklahoma, but the scattered decreases in the South Atlantic States are apparently assignable to local causes. Such causes also apparently account for the decrease in bean acreage harvested in central Michigan.



BAE 20586

FIGURE 126.—Production of peanuts is centered in three areas—the southeastern Virginia-northeastern North Carolina district, the southwestern Georgia-southeastern Alabama district, and the north-central Texas and adjacent Oklahoma district. The bulk of the peanuts used as human food is grown in the Virginia-North Carolina district; the crop in the more southern districts is mostly used as feed for hogs. Pork fattened on peanuts is a characteristic southern product, but the quality of the meat is said to be somewhat softer and less desirable than pork fattened on corn.



BAE 31113

FIGURE 127.—Apparently a large proportion of the peanut crop (harvested for nuts) was sold in 1929. The sales in the Virginia-North Carolina district are mostly for human food but in the southern Georgia-Alabama territory the peanuts sold are mostly to be crushed for oil or fed to hogs. A small quantity was sold in the northern Texas area and in western Tennessee. The peanuts grown outside these four areas (fig. 119) are almost wholly consumed on the farm, either hogged off or used for hay and forage.

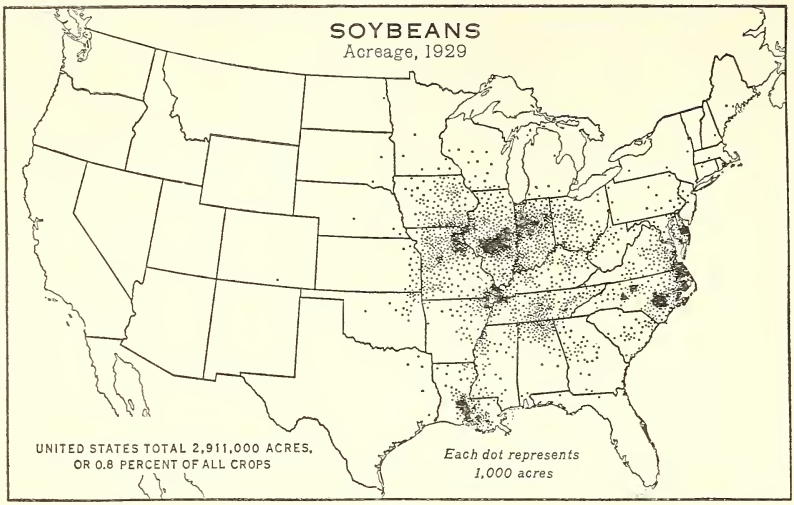


FIGURE 128.—The production of soybeans is as yet confined to the eastern half of the United States. In the census year 1929 the acreage was located mostly in five areas: (1) the central and eastern Corn Belt, (2) the Atlantic coast section from North Carolina to Delaware, (3) and (4) the lower and the upper ends of the Mississippi River Delta, and (5) central Tennessee and northern Alabama. Soybeans are a relatively new crop and production will doubtless expand into other areas. This map includes nearly 1,000,000 acres of soybeans grown mixed with corn and other crops.

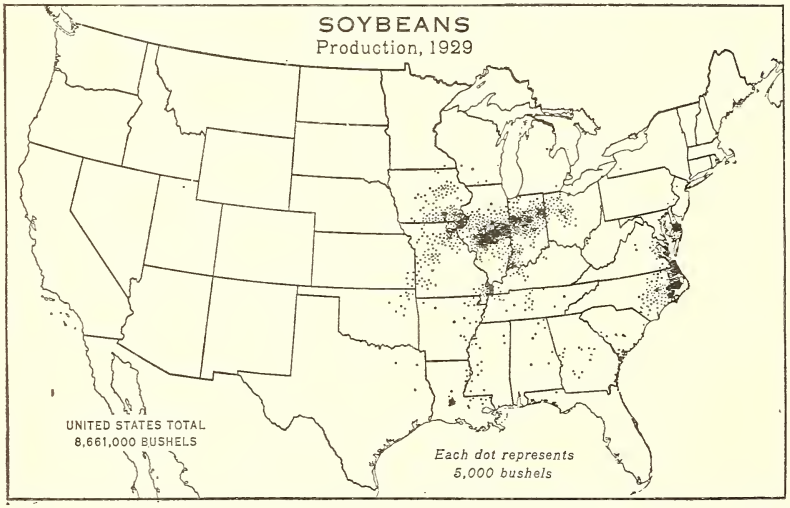


FIGURE 129.—Soybeans are grown to feed livestock and to sell for oil and other products, and a considerable acreage included in figure 128 is cut for hay or mixed with corn as a silage crop. The two main areas of soybean production are located in the central and eastern Corn Belt and along the Atlantic coast from North Carolina to Delaware. Illinois leads in the production of soybeans, with Indiana second. A large part of the crop in these States is sold for oil production.

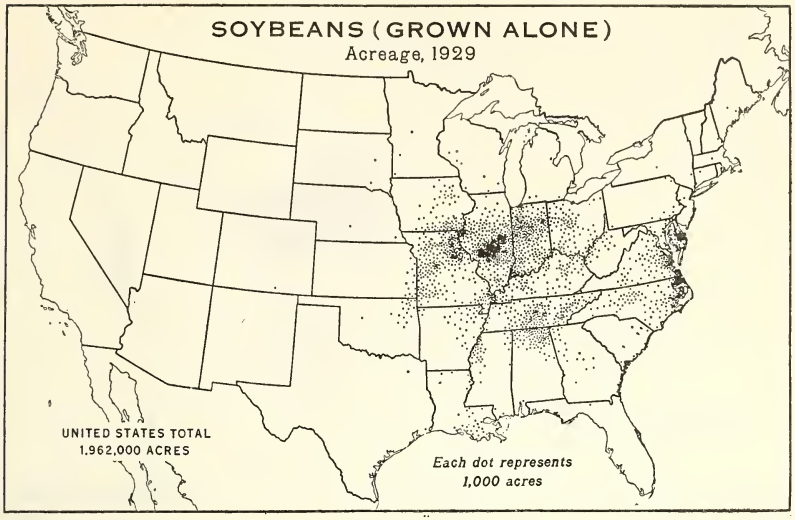


FIGURE 130.—This map shows the acreage of soybeans grown alone, that is, not mixed with any other crop. Nearly 2,000,000 acres were so grown in 1929, and nearly 5,700,000 acres in 1934. This crop is becoming widespread in the Corn Belt, the Corn and Winter Wheat Belt, and a little way into the Cotton Belt. Comparison with figure 128 reveals that soybeans in the Mississippi Delta and much of North Carolina are grown mostly mixed with other crops, but not to a notable extent elsewhere.

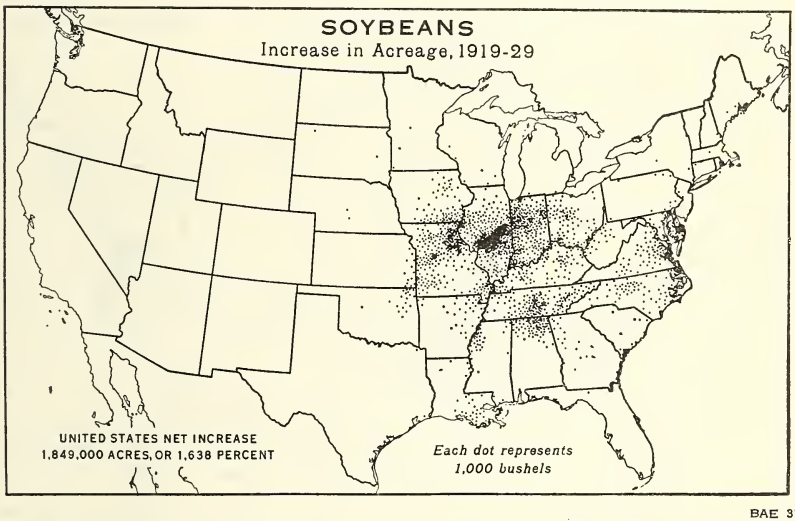


FIGURE 131.—Between 1919 and 1929 the expansion of soybean acreage in the United States was rapid. Before 1919, very little of this crop had been grown. The introduction of this crop from the Orient and its excellent adaptation to our Corn Belt and Corn and Winter Wheat Belt, together with its possibilities as a livestock feed and a soil-improving crop gave strong impetus to this expansion. When once the process of inoculation of the soil had been simplified by the agricultural colleges and extension forces the increase in acreage was rapid.

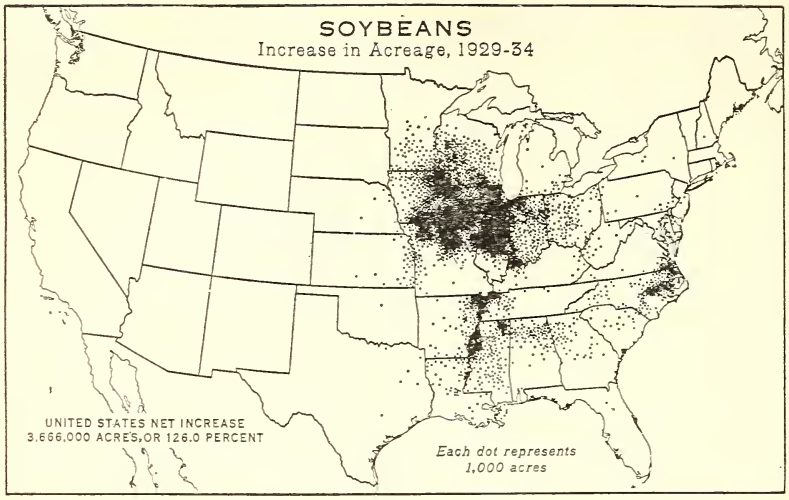


FIGURE 132.—Despite the drought in 1934, the acreage of soybeans harvested was more than double that of 1929. Some of this increase may have been as a substitute for other crops killed by drought. The greatest increases took place in Illinois, Wisconsin, Iowa, and northern Missouri. The trend of the crop was northwestward. The climate of Manchuria, the great center of world production, resembles that in the area bounded by lines from Omaha to St. Paul, Winnipeg, Canada, and Williston, N. Dak, thence back to Omaha.

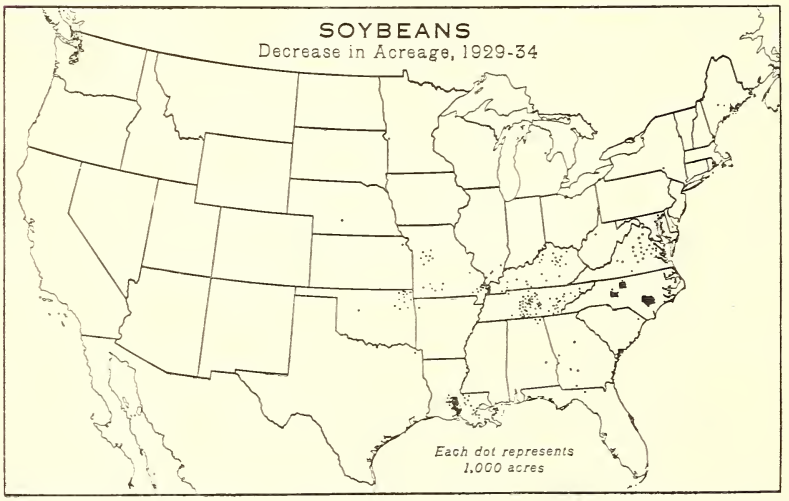


FIGURE 133.—The decreases in acreage of soybeans between 1929 and 1934 were local and small. Several counties in North Carolina and Louisiana reported a sizeable decrease. This may be owing in part to a shift back to tobacco and sugarcane, respectively. The decreases in Virginia, Tennessee, Kentucky, and Missouri are apparently real, but may prove transitory. The general trend in acreage of soybeans was rapidly upward.

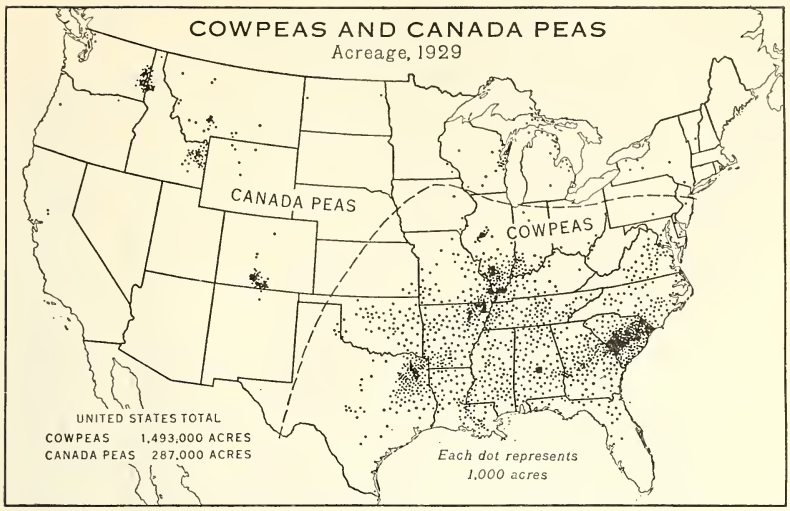


FIGURE 134.—Cowpeas are the principal annual legume in the Cotton Belt as soybeans are in the Corn Belt. Both crops are grown in the intervening Corn and Winter Wheat Belt. Cowpeas are a feed crop, a cover crop, and a leguminous soil builder. The areas of densest production in 1929 were in South Carolina, eastern Texas, and southern Illinois. Canada peas are locally important along the lake shores of Michigan and Wisconsin, in the San Luis Valley of Colorado, the Snake River Valley of Idaho, and the Columbia Plateau—all areas of cool summer climate.

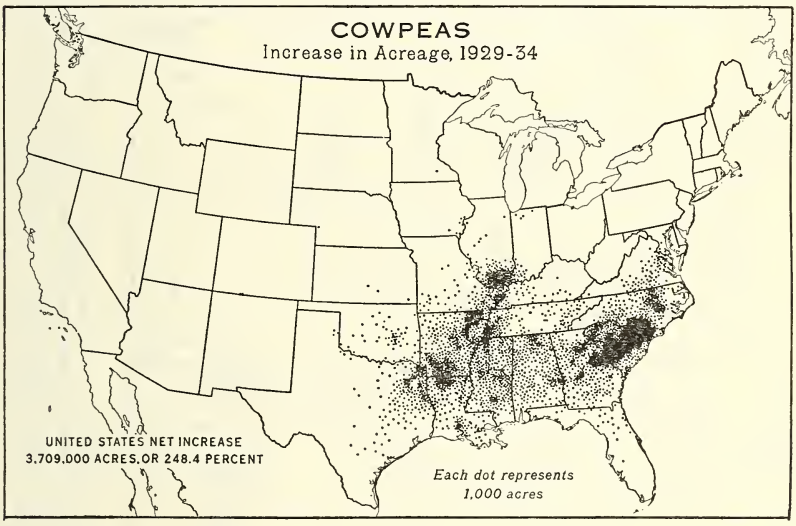


FIGURE 135.—This map bears testimony to the influence of the soil-conservation program in the South and affords a basis for hope that more permanent systems of farming are being developed. Cowpeas protect the soil from erosion, add to its humus and nitrogen content, and provide forage for livestock. The increase in acreage of cowpeas in the Carolinas between 1929 and 1934 was about 500 percent, and in Mississippi 570 percent. Cowpeas are grown with corn and other crops as well as alone. The map is based on the census statistics of total acreage.

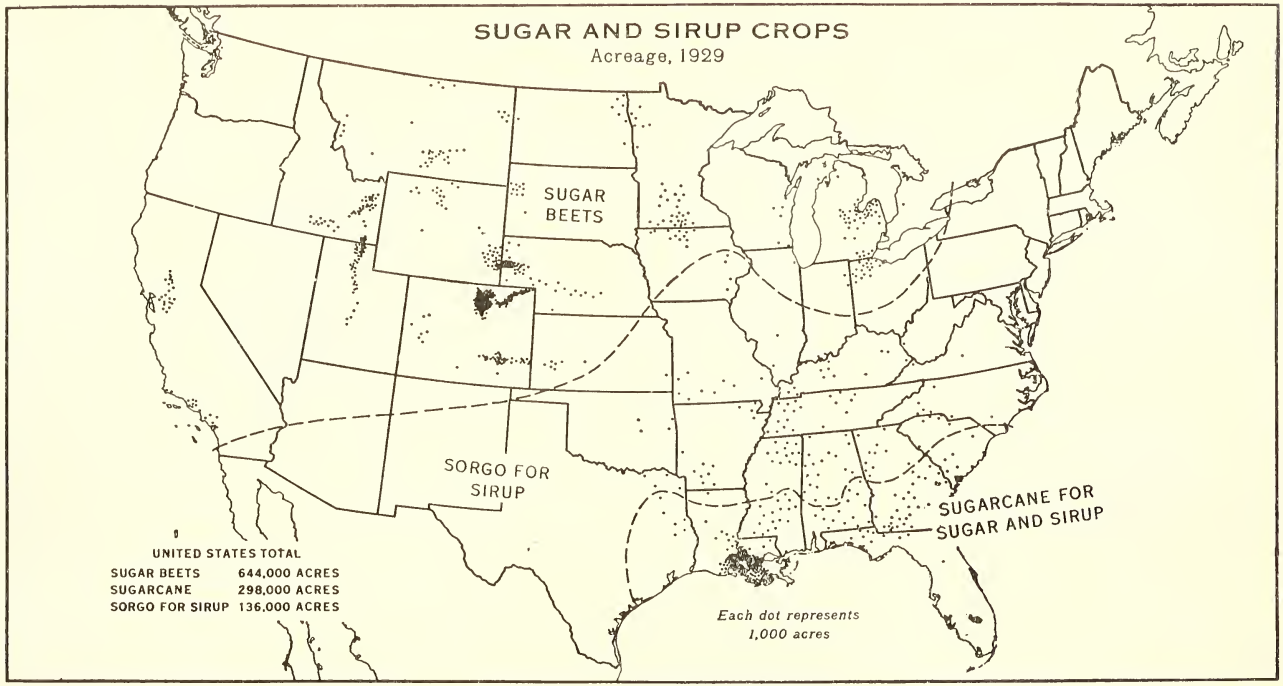


FIGURE 136.—Sorgo is used to produce sirup, not sugar, and the acreage in 1929 was much smaller than in 1909 and 1919. The sirup is mostly made on the farm and only a little enters into commerce. Sugar beets do not, in general, have a sufficiently high sugar content to be manufactured profitably where the summer temperature is over 72° F. and the beets must then compete with corn for the farmer's labor. Sugarcane is now grown commercially in this country only in southern Louisiana and around Lake Okeechobee, Fla.

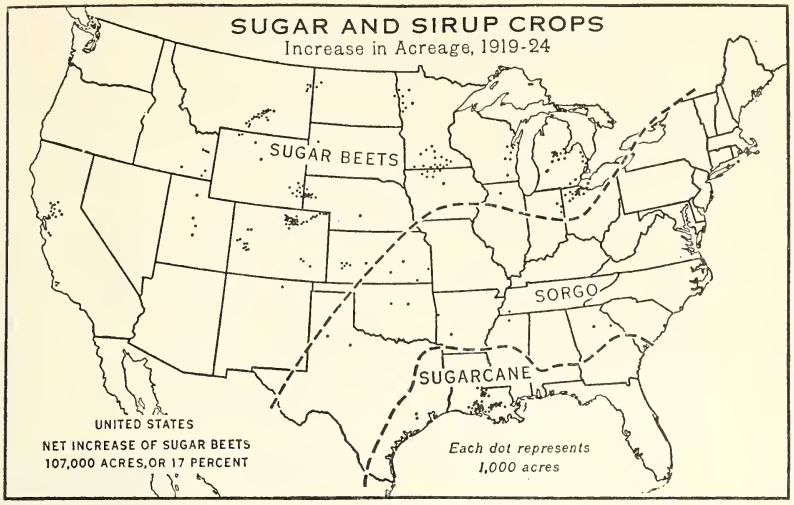


FIGURE 137.—Following the general collapse of prices of farm products in 1920, one of the crops that continued to pay fairly well was sugar beets. The increase in acreage between 1919 and 1924 occurred mostly in northwestern Ohio, Michigan, Minnesota, and in the irrigated valleys in northern Colorado, western Nebraska and adjacent Wyoming, southern Montana, and in the Sacramento Valley in California. There was also some increase in acreage of sugarcane in Louisiana, but on the whole neither sugarcane nor sorgo was increasing in acreage during that period (fig. 138).

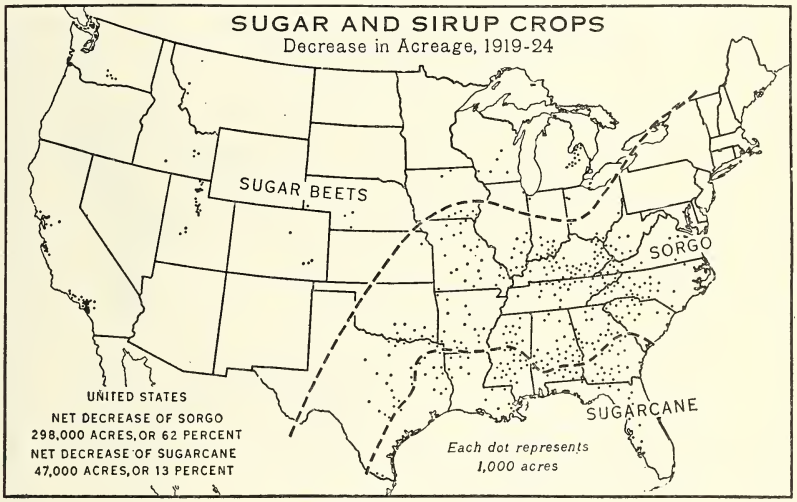


FIGURE 138.—The acreage of sorgo for sirup declined nearly two-thirds between 1919 and 1924 and the net decrease in sugarcane acreage amounted to 13 percent. The decline in sorgo acreage was almost universal, but that of sugarcane was confined to the sirup-producing areas. The acreage in the "sugar bowl" of Louisiana increased considerably. Sugar-beet acreage also expanded during this period, although two outstanding territories of declining acreage are shown on the map above—the Salt Lake and Cache valleys of Utah and the coastal basins in southern California.

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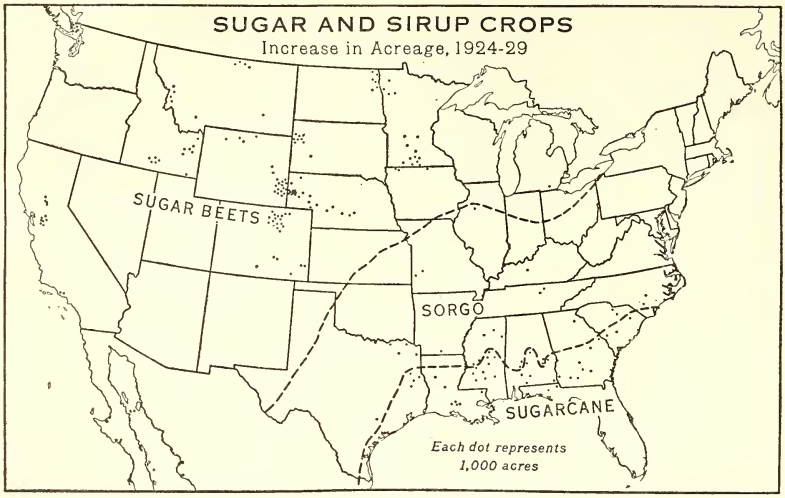

FIGURE 139.—Prior to 1920 the acreage of sugar beets had been trending upward. In 1920, 1921, and 1924 the acreage exceeded 800,000. From 1925 to 1929 it ranged between 650,000 and 750,000. The season of 1929 was subnormal in parts of the West. Nevertheless, some increase in acreage over 1924 is indicated in the North Platte Valley of southeastern Wyoming and western Nebraska, in the South Platte Valley of northern Colorado, and in scattered areas elsewhere. Sorgo showed almost no increase in this 5-year period. Sugarcane for sirup increased in many widely scattered counties in the South.

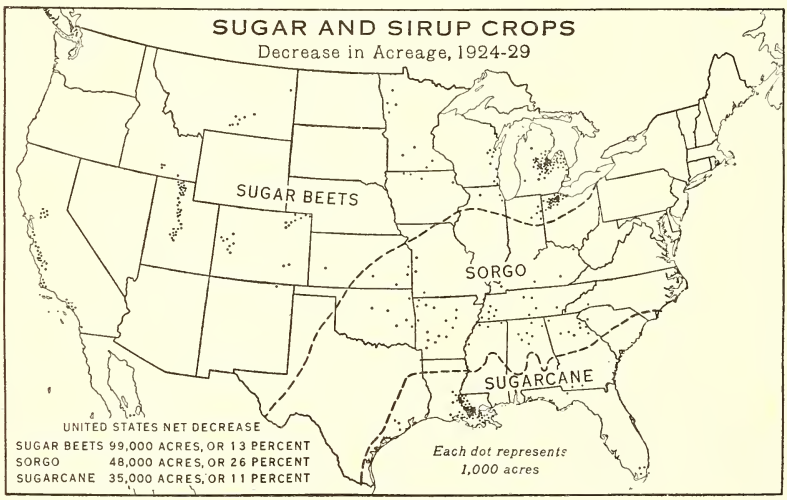

FIGURE 140.—All of the sugar crops showed decreases in 1929 as compared with 1924 for the country as a whole, principally because 1924 was a year of large acreage. The chief areas of shrinkage in sugar-beet acreage were northern Ohio, Michigan, the Salt Lake, Jordan and Cache valleys of Utah, and the coastal valleys of California. The decrease in acreage of sorgo for sirup was general. The decrease in sugarcane acreage was almost confined to the "sugar bowl" of Louisiana. However, yield per acre and production of sugar was more than double that in 1924.

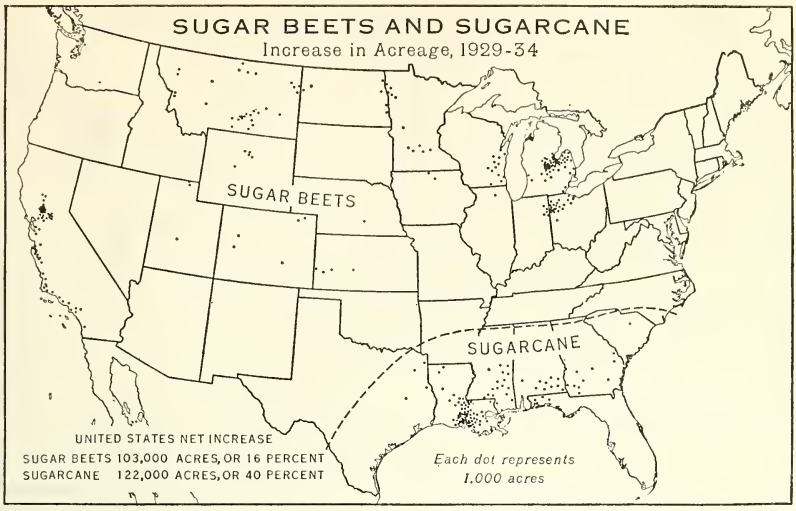

FIGURE 141.—The sugar crops were an exception to the general downward trend in acreage of the more intensive cash crops during the period 1929–34, induced by drought and the agricultural adjustment program. The chief areas of expanded acreage of beets were in northwestern Ohio, Michigan, and central California, but increases occurred also in Wisconsin and Montana. The acreage of sugarcane had been increasing since 1927, largely because of the introduction of disease-resistant varieties. These saved the industry. No census statistics of sorgo are available for 1934.

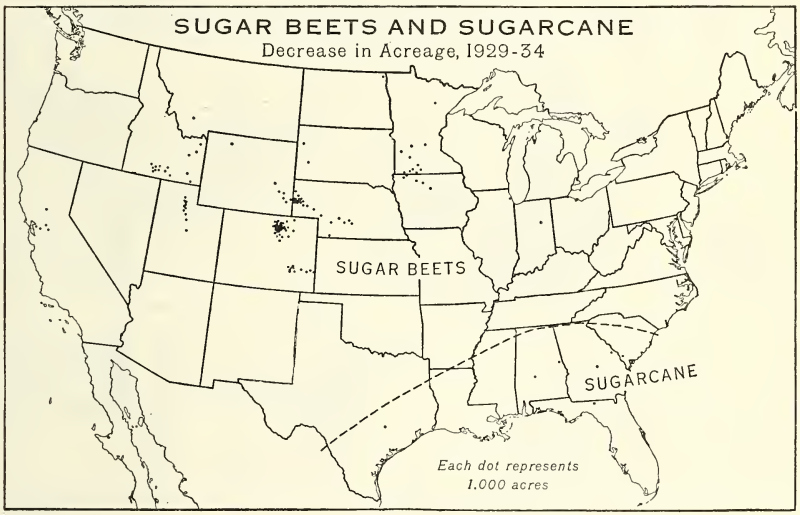

FIGURE 142.—Despite the general increase in acreage of sugar beets between 1929 and 1934, two areas in the West reported a striking decline—the North Platte Valley in western Nebraska and the South Platte Valley in northern Colorado. Scattered counties reported decreases in southern Minnesota, southern Idaho, Utah, and California. In 1933 the acreage of sugar beets reached nearly 1,000,000, the largest in the Nation's history, and the acreage of sugarcane in 1934 exceeded 400,000, the highest in any census year since 1909.

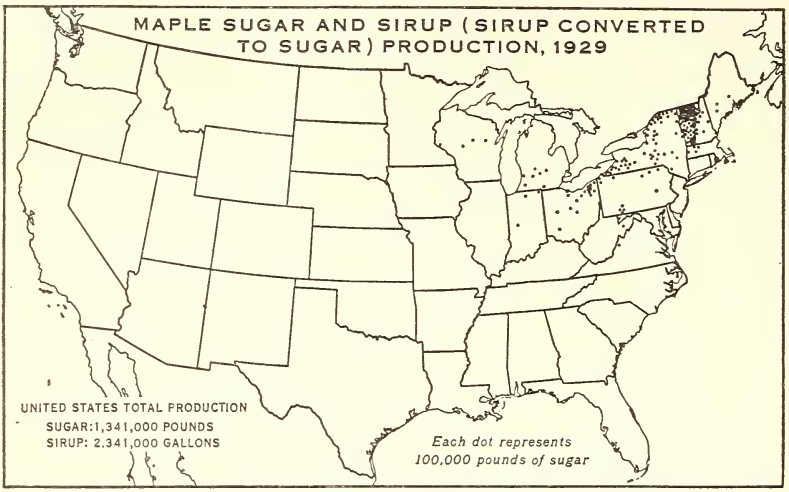

FIGURE 143.—Maple sugar is an important product on many farms in the northeastern States, notably Vermont, New York, and northeastern Ohio. It is a side-line product on nearly all farms and a welcome source of additional income. As the sugar season comes in early spring, thousands of farmers are able to tap their maple groves and boil down the sap with little extra labor and no interference with other farm work. The contrast between Vermont and New Hampshire can be explained only on the basis of soils that affect the distribution of the maple trees.

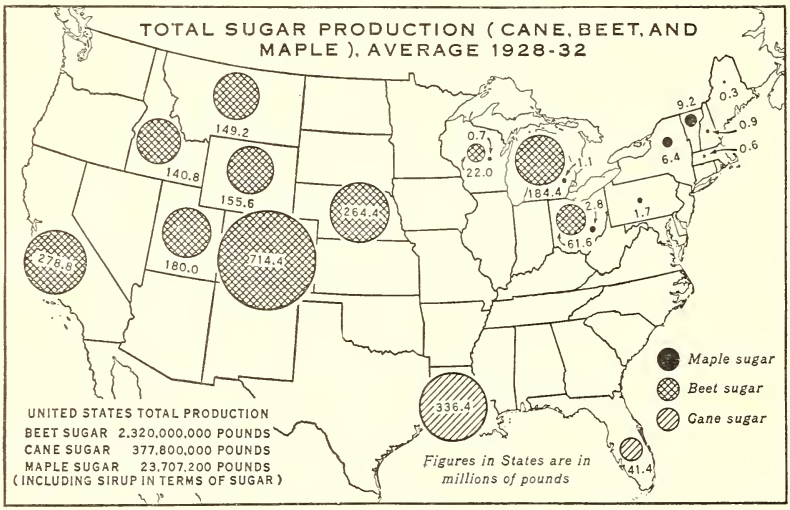

FIGURE 144.—Six times as much beet as cane sugar is produced in the United States, but about half the sugarcane acreage is used to produce sirup. The ratio of beet sugar to maple sugar is 100 to 1. The principal beet-producing States are Colorado, California, Nebraska, Michigan, Utah, Wyoming, Montana, and Idaho. Ohio and Wisconsin produce smaller quantities. Louisiana is the cane-producing State but all of its sugar is made in the lower Mississippi Delta. Formerly some sugar was produced in Texas and now an increasing quantity is produced in Florida. The figure on the map is for 1933.

POTATOES, SWEETPOTATOES, AND VEGETABLES

Potatoes, like sugar beets, are grown commercially principally along the northern margin of the Corn Belt, both because of their suitability to such a climate and the competition of corn for the land to the south. But, unlike sugar beets, potatoes are grown for home or local use throughout the Corn Belt, even in parts of the Cotton Belt and Gulf coast, where a winter crop is raised, and some of the largest producing areas are in the northeast, where sugar beets are not grown. No other crop, except hay, is reported from so many counties in the United States as potatoes.

Nevertheless, the acreage of potatoes has remained more or less stationary for a third of a century, and the trend of acre yields has been horizontal for half as long. Since the beginning of the century population has increased about 60 percent. The consumption (disappearance) of potatoes per person during the years 1902–6 averaged 190 pounds a year, and in each succeeding 5-year period was as follows: 176, 165, 162, 155, 146, and 144 pounds.[1]

Sweetpotatoes are a southern crop, the northernmost areas of production being southern New Jersey, northern Ohio, and Muscatine County, Iowa. The percapita consumption (disappearance) of sweet potatoes, like potatoes, was declining in the Nation as a whole before the depression, but then increased, as the following 5-year average disappearance for the periods 1917-21 to 1932–36 indicate: 37, 26, 25, and 33 pounds.[2]

The per capita consumption of the vegetables, on the other hand, particularly the green leafy vegetables, increased rapidly prior to the depression. The most substantial data on consumption of vegetables are contained in the returns to the Bureau of Agricultural Economics on carlot shipments. Doubtless most of these carlot shipments are consumed by the urban population, and this increased 27 percent between 1920 and 1930. This 25- to 30-percent increase in consumers may be compared with the 350-percent, or several fold, increase in shipment of lettuce, and 240-percent increase in shipment of spinach. Carlot shipments of carrots increased 670 percent during the decade, of string beans 540 percent, of celery 180 percent, of cauliflower 160 percent, but of cabbage only 9 percent.

Totaling all the vegetable shipments, except potatoes and sweetpotatoes, it appears that there has been an increase during the decade of about 100 percent. Recalling the 27-percent increase in urban population, it appears that consumption of the vegetables per person in the cities increased around 60 percent. But for the leafy vegetables the increase in consumption per person was about 120 percent. This assumes that production for local markets has increased at a similar rate to carlot shipments. California and Florida profited most by this increased consumption of the vegetables, for much of it was due to the availability of vegetables in the winter as well as in the summer season at a price within the reach of many people.

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[1] Pounds production minus seed, minus 10 percent for feed, minus use for starch, divided by population on July 1 of the midyear in the period.

[2] Pounds production minus seed divided by population on July 1 of the midyear in the period.

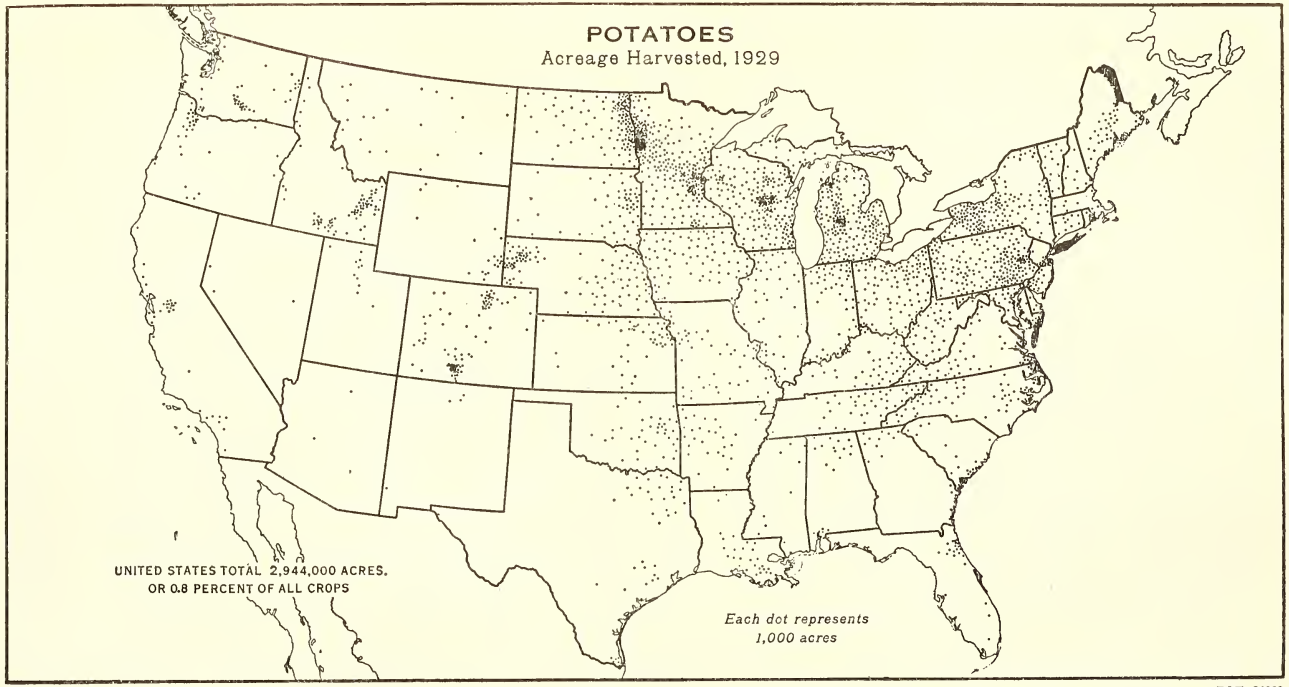
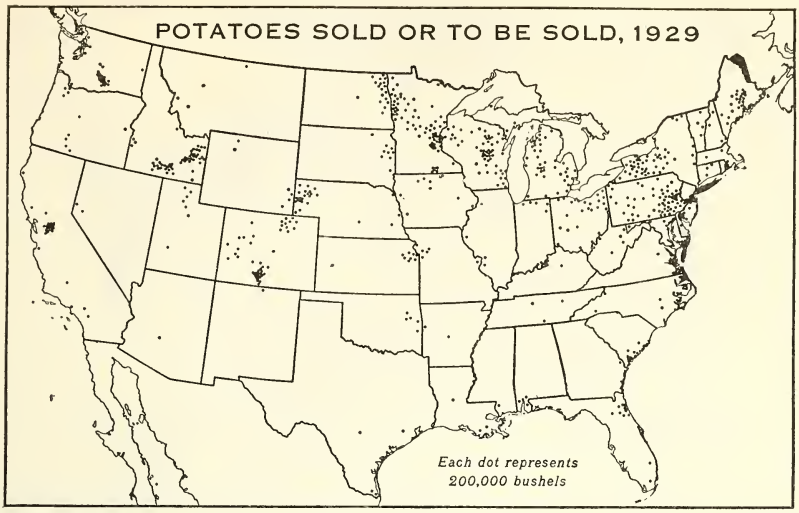
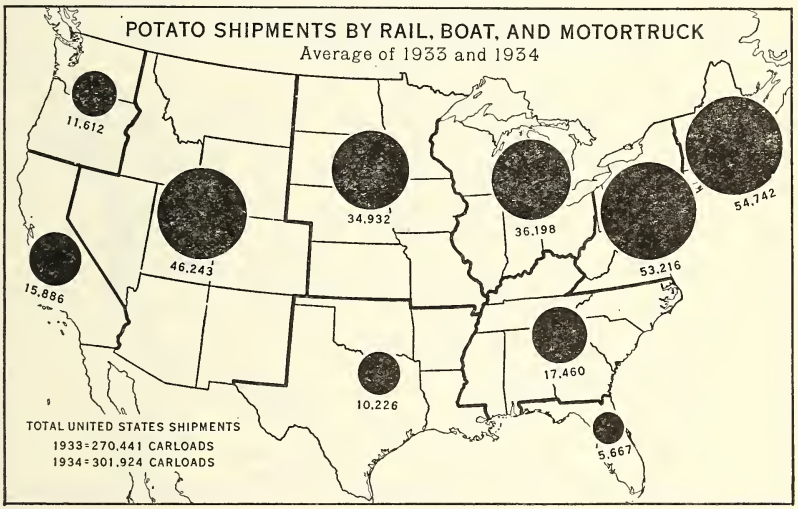


FIGURE 145.—The districts of heaviest production of potatoes lie in latitudes north of the Corn Belt. This is partly because the quality and yield of potatoes are better in cool climates and partly because corn requires labor at the same time, is very productive and on the average has given a better return. Many of the potato-producing centers are in districts of sandy or loamy soil—Aroostook County, Maine, Long Island, N. Y., New Jersey, eastern Virginia, western Michigan, central Wisconsin, and eastern Minnesota. In recent years potato production has become more important in the South and there is now a fairly continuous gradation of regions which dovetail into each other as to shipping season—early, intermediate, and late.



BAE 31114

FIGURE 146.—The commercial crop of potatoes is more concentrated than the total crop; that is, the scattered dots on the acreage map (fig. 145) represent largely production for local use. The districts of densest commercial production are Aroostook County, Maine, Long Island, N. Y., New Jersey, and the Eastern Shore of Virginia and Maryland, central Wisconsin and Minnesota, several districts in Colorado and Idaho, and the delta district east of San Francisco Bay. Somewhat over half the 1929 potato crop was sold; the remainder was used on the farms where grown.



BAE 3162

FIGURE 147.—Although the national acreage is small, potatoes are more widely grown in the United States than any other crop, except hay. No other commercial crop is important on both the Atlantic and Pacific coasts, in parts of the South and of the North, on the Great Plains and in the Rocky Mountains. Potatoes are grown in summer in the North and in winter in the South. They thrive under both humid and subhumid climates, and on a wide variety of soils.

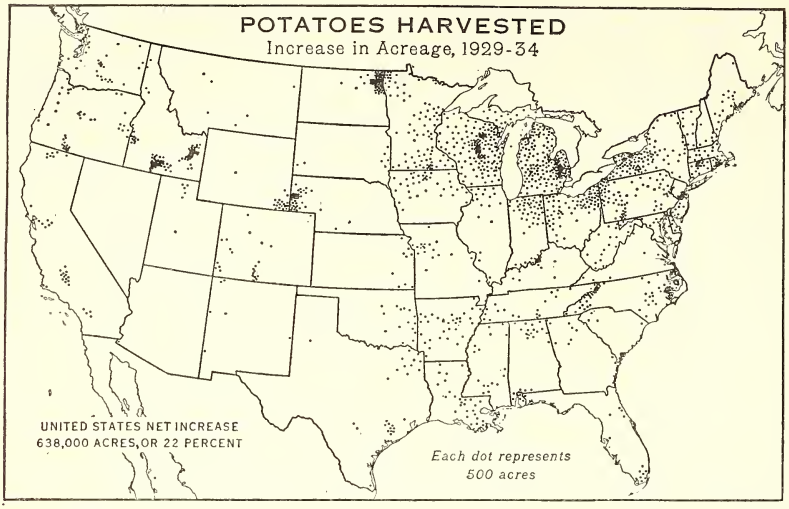


FIGURE 148.—Unlike the acreage of most major crops, acreage of potatoes increased notably between 1929 and 1934. The increase was relatively as great in the West as in the East, and it is surprising that, despite the drought of 1934, the increase was large in several dry-farming counties of the Great Plains. The increase was notable also in the irrigated districts of southern Idaho and the Pacific Coast States. Significant also is the increase along the northern margin of the Cotton Belt, evidently for home use mostly.

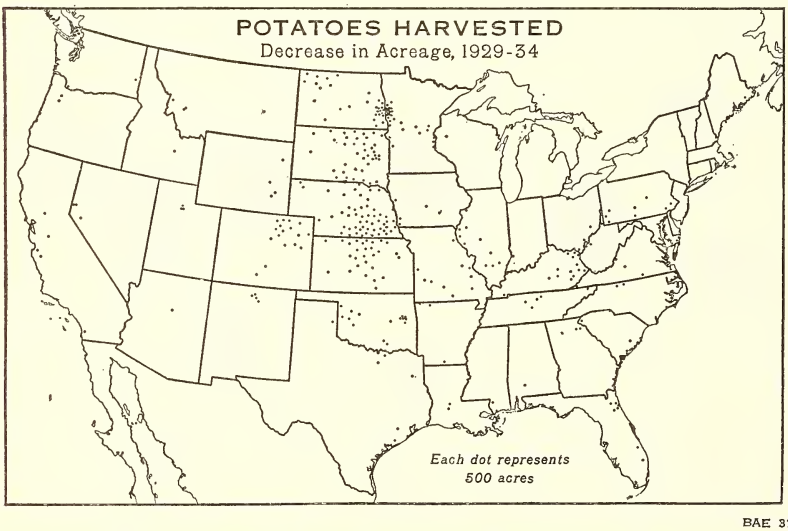
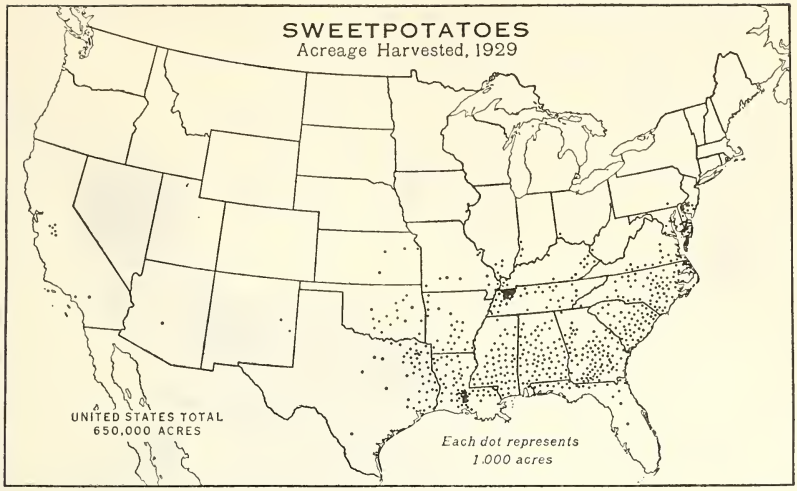
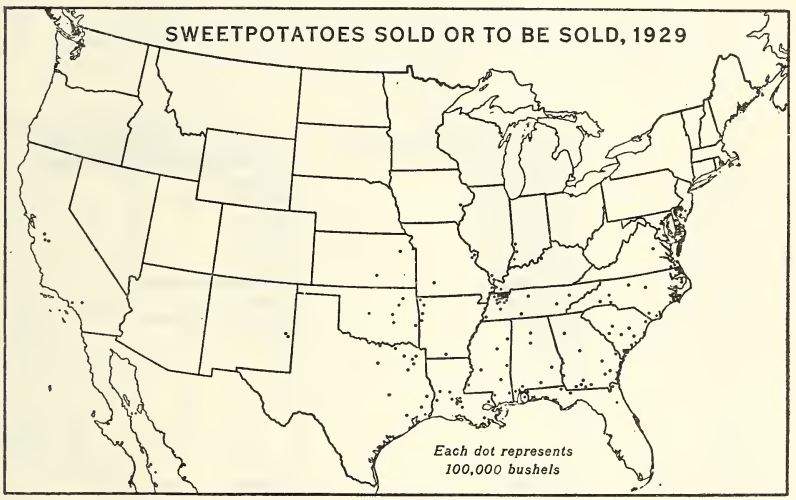


FIGURE 149.—The decrease in acreage of potatoes between 1929 and 1934 was located mostly in the drought-stricken region of the Great Plains. The decline in acreage around Fargo, N. Dak. and the increase farther north marked the line between drought and nearly normal rainfall in 1934. Drought probably explains the scattered decrease in southwestern Illinois and parts of the drainage area of the Ohio River. Potato acreage in 1934 was fully normal in the country as a whole; in 1929 it was below normal, even below 3,000,000 acres.



BAE 24567

FIGURE 150.—Sweetpotatoes are a southern crop but are grown in sandy soils as far north as Muscatine County, Iowa, and southern New Jersey. In general, New Jersey sweetpotatoes are drier than those of the South (some of the latter are called yams) and are highly esteemed for their quality. In the eastern and central Cotton Belt, sweetpotatoes largely replace potatoes as a staple food of the people. It will be noted that there are four intensive areas of sweetpotato production. The total crop harvested in 1929 amounted to 65,000,000 bushels.



BAE 31115

FIGURE 151.—Sweetpotatoes are grown in the South mainly as a food crop. They are the staple vegetable for many southern households. The areas of commercial production are chiefly four: (1) the Weakley and Henry County district in western Tennessee, (2) the Lafayette-Opelousas district in southern Louisiana, (3) the Eastern Shore area of Virginia, Maryland, and Delaware, and (4) southern New Jersey. Varying quantities of sweetpotatoes are sold all over the South, but the major supply for the city markets comes from these four areas.

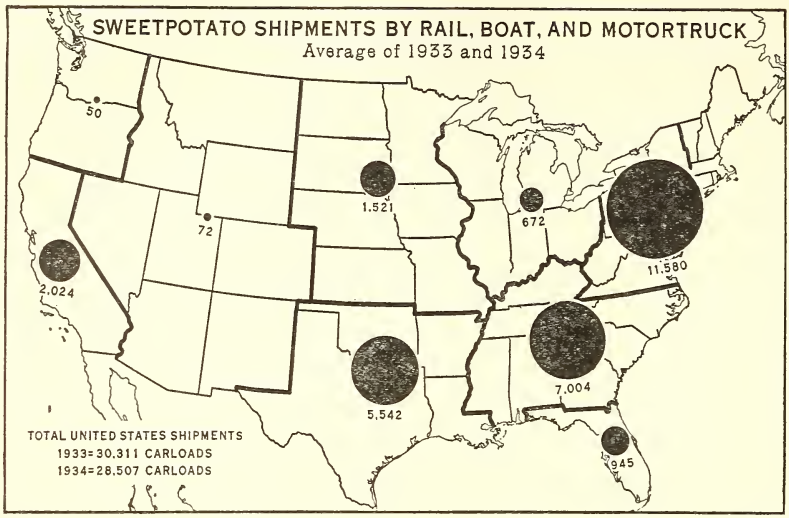


FIGURE 152.—The years 1933 and 1934 have been averaged and the States grouped in this map to give a rough picture of the commercial shipments of sweetpotatoes. Most eastern market supplies come from the Atlantic coast districts extending from southern New Jersey to North Carolina, supplemented by some shipments from Tennessee and the South Atlantic States. The Mississippi Valley and Great Lakes cities receive their supplies from the west-Tennessee district and smaller centers in the States to the south and west. California supplies the Pacific coast markets.

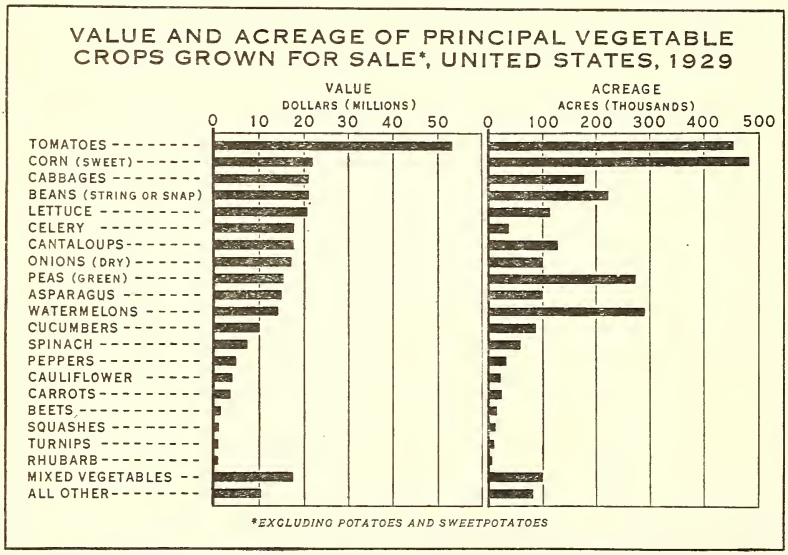


FIGURE 153.—The value of the tomato crop in 1929 was more than double that of any other vegetable (excluding potatoes and sweetpotatoes), but sweet corn exceeded tomatoes slightly in acreage. The three next most important crops, about on a par as to value, were cabbage, string beans, and lettuce. But the acreage of green peas and watermelons exceeded the acreage of any of these three crops. The value of all vegetables harvested for sale was nearly $300,000,000 in 1929 and the acreage was 2,811,715, which was nearly double that in 1919.

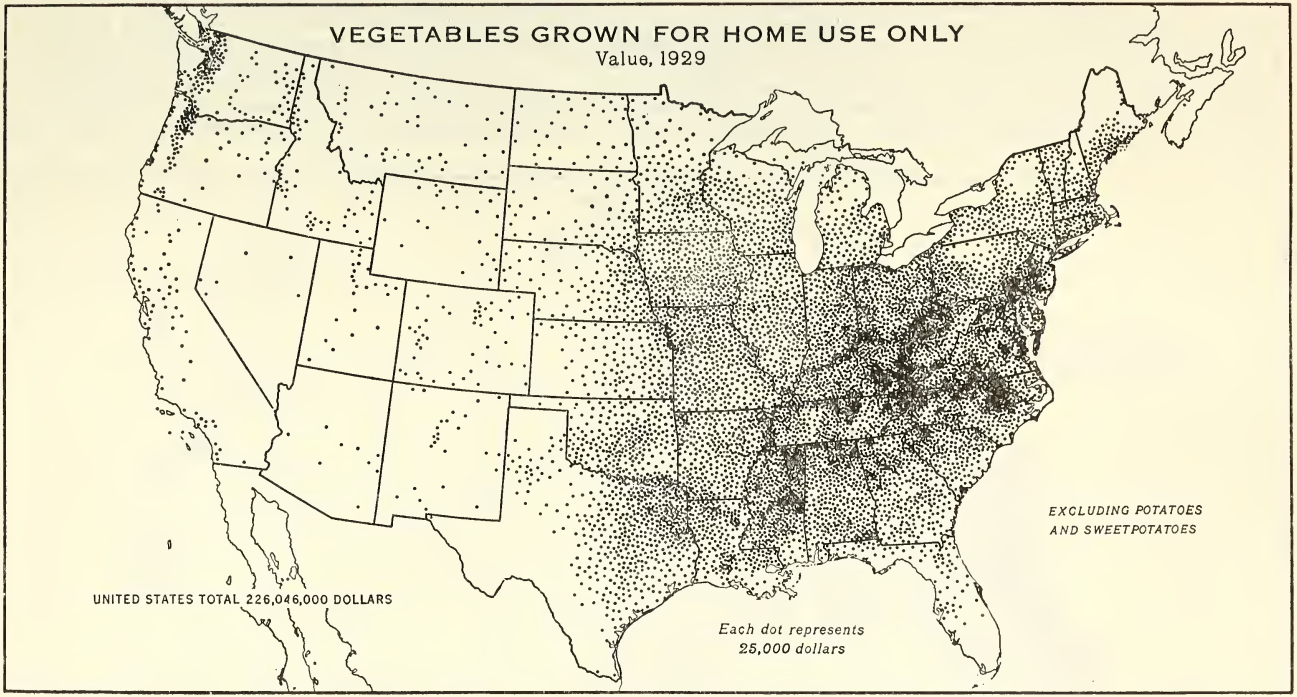


FIGURE 154.—In 1919 nearly 5,100,000 farms reported vegetables grown for home use and the value was estimated in that year of high prices at $345,000,000. In 1929 the corresponding figures were 4,360,000 farms and $226,000,000. In 1934, farms reporting increased to 4,682,000 but the value in that depression year was only $137,000,000. The areas of greatest acreages of vegetables for home use are southeastern Pennsylvania and adjacent New Jersey, much of Maryland and Virginia, the Ohio River Valley, large portions of the southern Appalachians, central North Carolina and much of the piedmont to the south, northern Alabama, and northeastern Mississippi—all characterized by humid climate, only moderately fertile soils, a generally dense population, and small farms owned by frugal people.

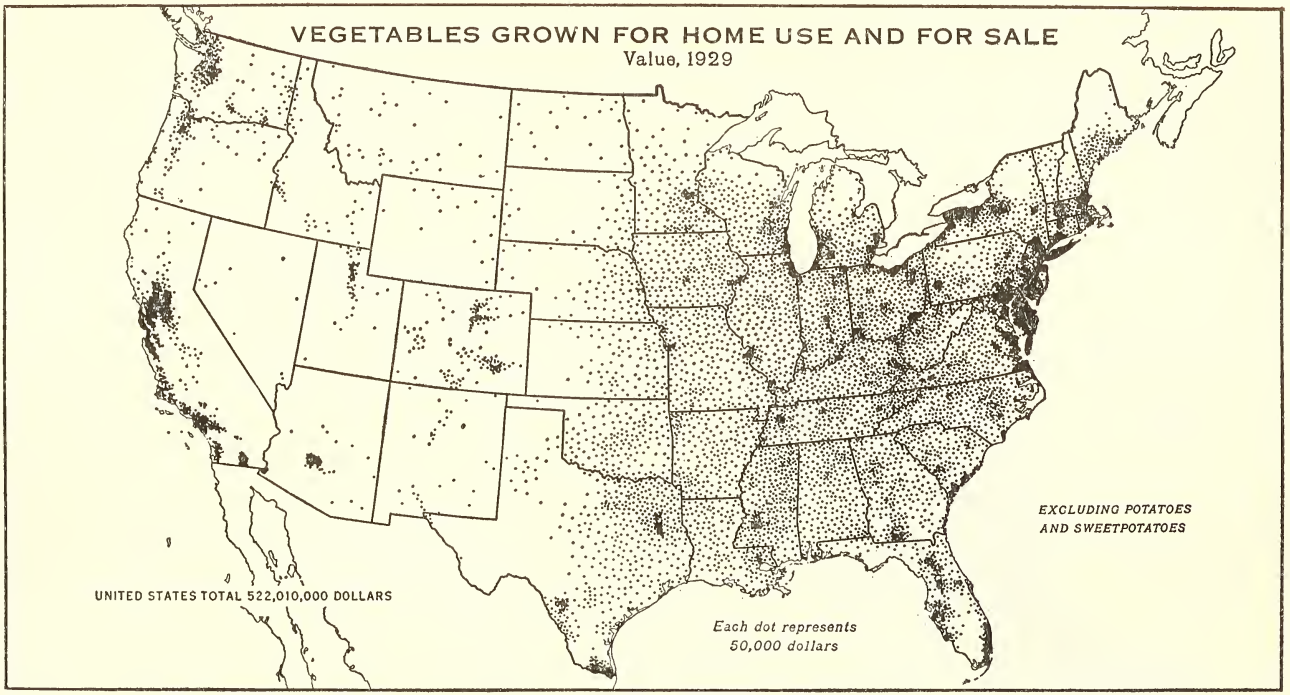


FIGURE 155.—The more-or-less even distribution of dots in this map represents, in general, vegetables grown for home use. The black areas represent vegetables grown for sale. The most important area of commercial vegetable production extends from Long Island, N. Y., to Norfolk, Va. In this area about one-fifth of the country's commercial crop is grown. A second important area extends from Utica, N. Y., west to Buffalo, and in lesser density surrounds Lake Erie. Several important districts have developed in the central West, notably near the cities. In the South, where climate permits a winter or spring crop, soils and early developments seem to be important factors. In California and Arizona, where the crop is shipped long distances, temperatures and water supply, and soils, are more important than urban influence.

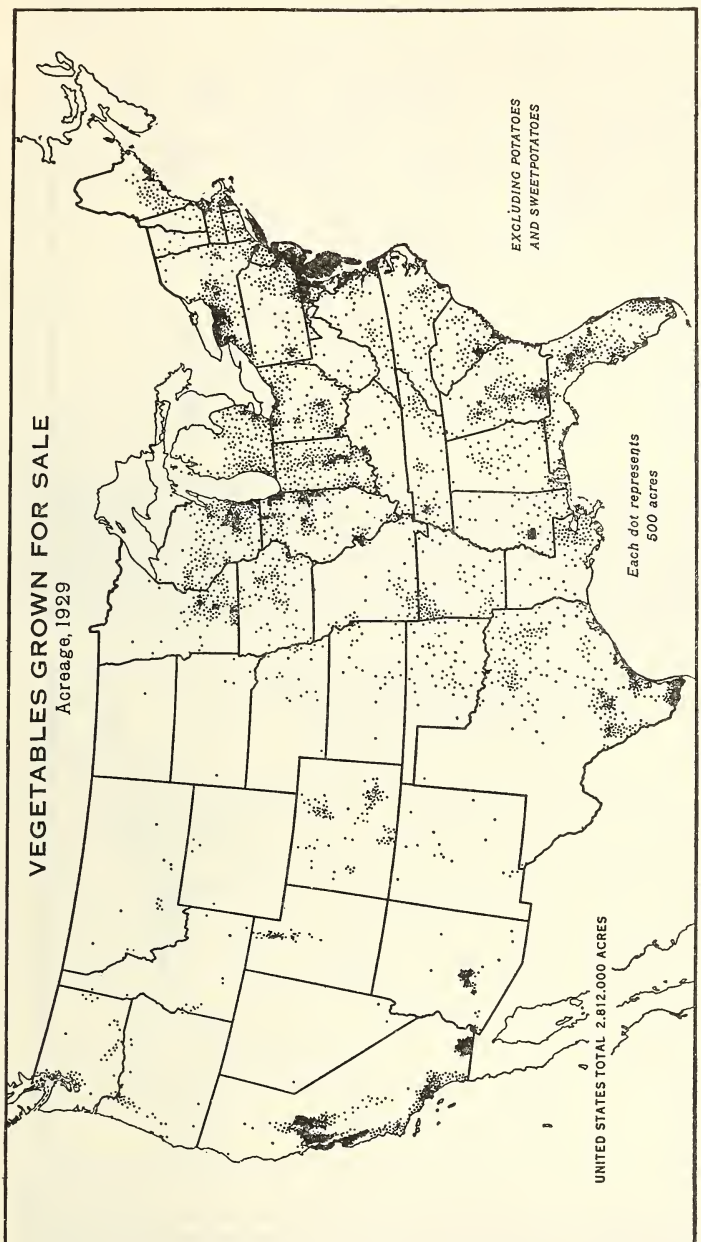


FIGURE 156.—The outstanding areas of commercial acreage of vegetables are the Atlantic territory from Norfolk northward to Long Island, N. Y., the western New York area, and the valleys of California. Lesser vegetable-growing districts are widely spread in the States north of the Ohio River, especially around the large cities, and of winter vegetables in the States bordering on the Gulf of Mexico, notably southern Texas, also in Georgia and the Carolinas, and in California and Arizona. The acreage of vegetables is very small in the Great Plains, except in the irrigated districts. One-fourth of the Nation's commercial acreage of vegetables is in the Atlantic Coast States north of North Carolina, another fourth in the Cotton Belt States and Florida, and one-fifth in the East North Central States.

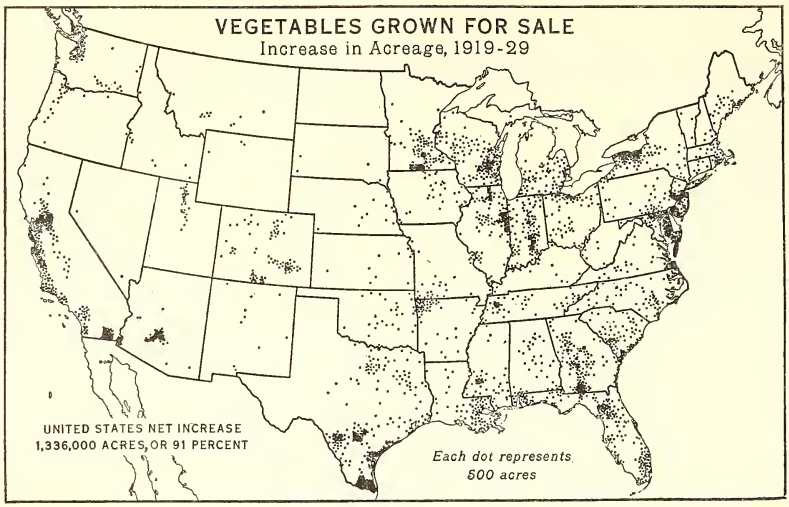


FIGURE 157.—The increasing population in the United States and the spread of information on diet, with its emphasis upon green vegetables, have led to a widespread increase in the cultivation of these crops during recent years. The increases have been greatest in southern districts of specialized winter vegetables and in well-adapted areas in the North adjacent to large cities. In the winter-vegetable States the percentage increase was much greater than the national average. It is now possible for the people in the North to have fresh vegetables in wide variety almost the year round.

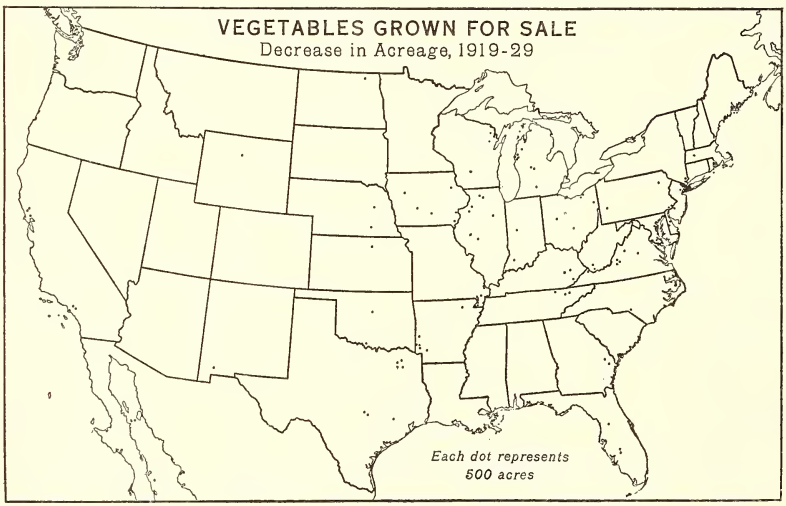
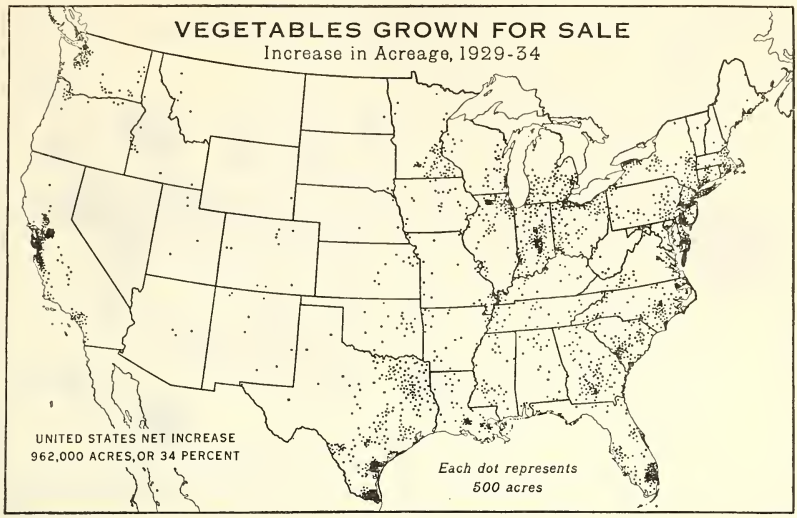
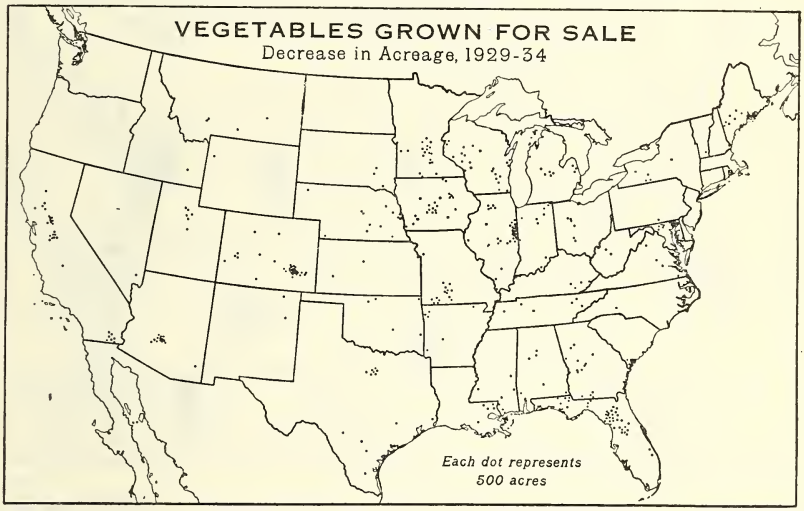


FIGURE 158.—The decrease in acreage of commercial vegetables between 1919 and 1929 was insignificant. Several thousand acres were lost around New York City, owing principally to residential expansion, and in the cotton-growing counties of Missouri. The small decreases elsewhere were mostly confined to counties scattered in the Corn Belt, Texas, Arkansas, and the southern Appalachian region.



BAE 31762

FIGURE 159.—The commercial production of vegetables has expanded rapidly. Formerly vegetables were grown mostly in the warm season near the places of consumption. But with the advance of transport facilities and with the widening knowledge of vitamins and other values of vegetables the expansion of acreage in the districts producing the winter supply has been very rapid, notably in southern Florida, Texas, and California. The increase was large also around the northern urban centers. Even during the recent depression the commercial acreage of the country increased more than one-third.



BAE 31763

FIGURE 160.—The decreases in commercial acreage of vegetables were more numerous and larger than during the predepression period, but they were not of great significance except locally. The districts reporting the greatest decreases were north-central Florida, east-central Illinois, several scattered counties in Wisconsin, Minnesota, and Iowa, the Arkansas Valley of Colorado, the Salt River Valley of Arizona, the Imperial Valley of California, and a few counties in the Sacramento Valley. The decreases in Wisconsin, Minnesota, and Iowa, and in the irrigated districts of the West, can probably be ascribed to drought.

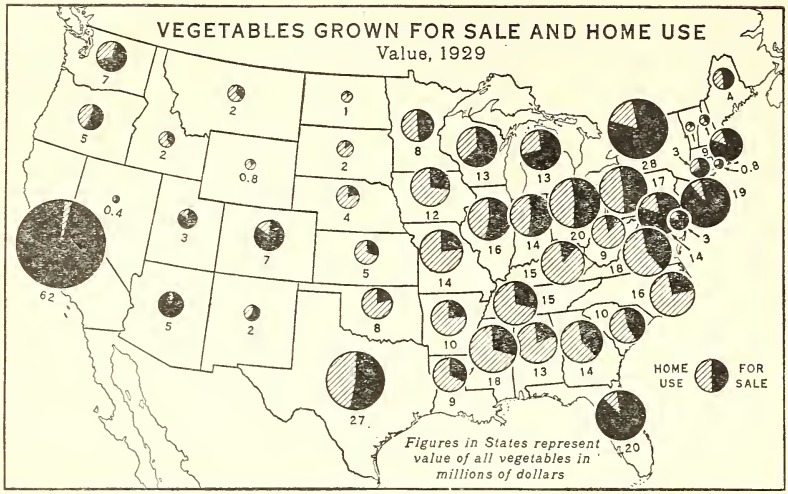


FIGURE 161.—In the northern Dairy Belt, with its many large cities, the commercial crop of vegetables constituted, except in Vermont and New Hampshire, one-half to nine-tenths of the value of all vegetables grown. In the eastern Corn Belt the proportion was about one-half and in the western Corn Belt one-fourth. In the South, except in Florida and the Appalachian area, the proportion was generally one-fourth to one-half. But in Florida and in California (which State produced more vegteables than any other two States), nearly all the production was commercial.

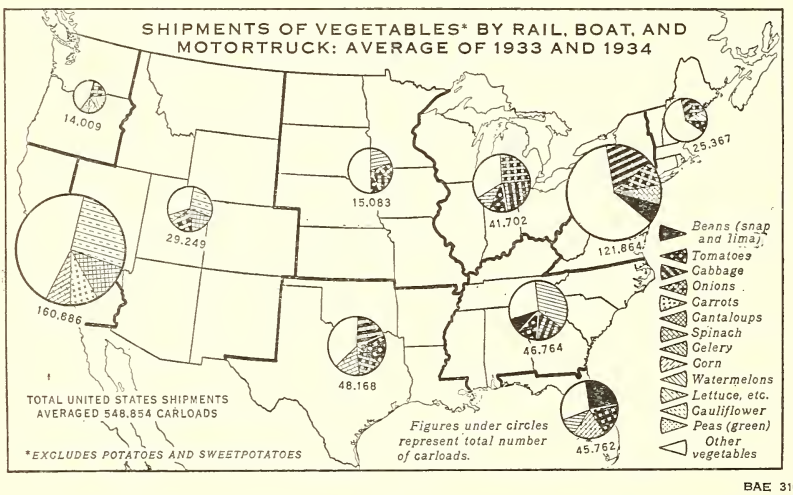


FIGURE 162.—Notwithstanding the severe drought of 1934, the shipments of vegetables for that year, averaged with those of 1933, exceeded half a million carloads. California was the largest shipper by a wide margin and was followed in point of volume by the eastern and southern trucking areas. A notable development of recent years is the very large increase in shipments by motortruck, especially from areas east of the Mississippi River. One-fourth of the California and Rocky Mountain shipments were lettuce and nearly one-fifth of the North Atlantic shipments were cabbage.

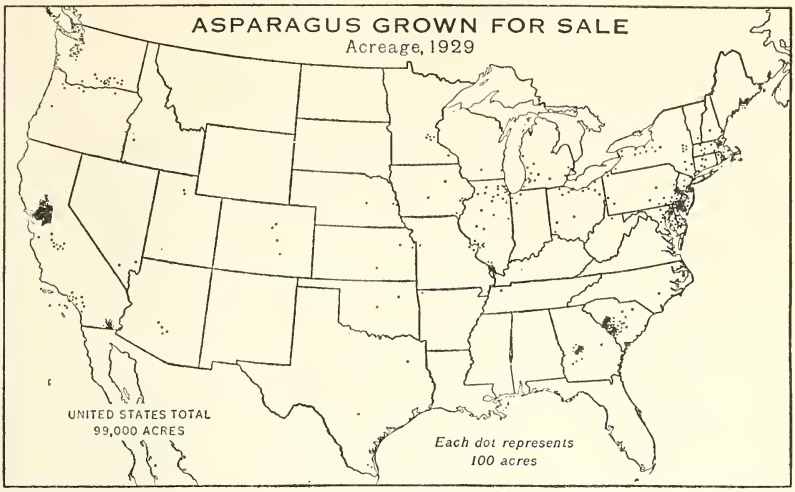


FIGURE 163.—In this map each dot represents only 100 acres. Most of the asparagus grown for sale is produced in six areas. Two of these are in California where the crop is mostly canned. The muck and peat lands of the Sacramento and San Joaquin delta produce nearly half of the commerical crop of the Nation. The eastern areas are in southern Illinois, Macon and Peach Counties, Ga., several counties near Aiken, S. C., and more important areas in southern New Jersey and adjacent sections of Pennsylvania, Delaware, and Maryland.

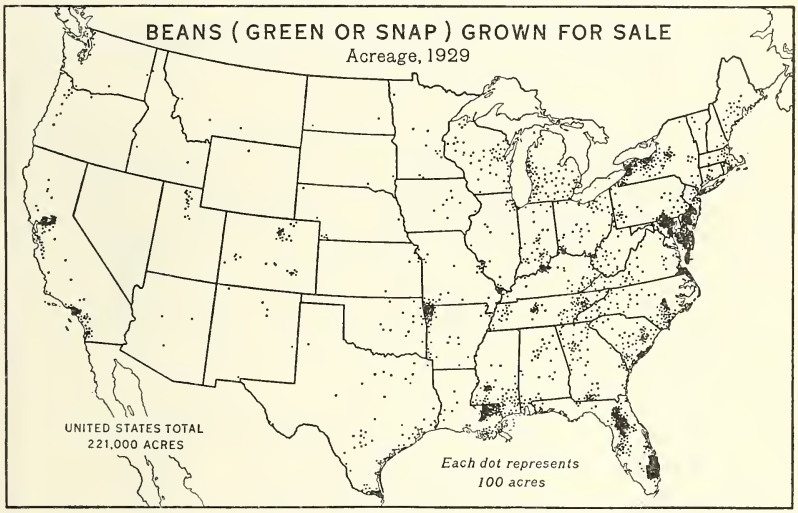


FIGURE 164.—The principal areas producing the late crop of green or snap beans are western New York, Michigan, and Wisconsin (mostly canned); and in Louisiana, Mississippi, the Carolinas, and Virginia (for sale fresh). The chief intermediate areas are southern New Jersey, central Maryland, and the Delmar Peninsula of Maryland, Delaware, and Virginia, and the southern Appalachians, also near the Ohio River cities, and in the Ozark Plateau. The principal early-crop areas are in Florida, the Carolinas, southern Louisiana, and Mississippi, Texas, and California.

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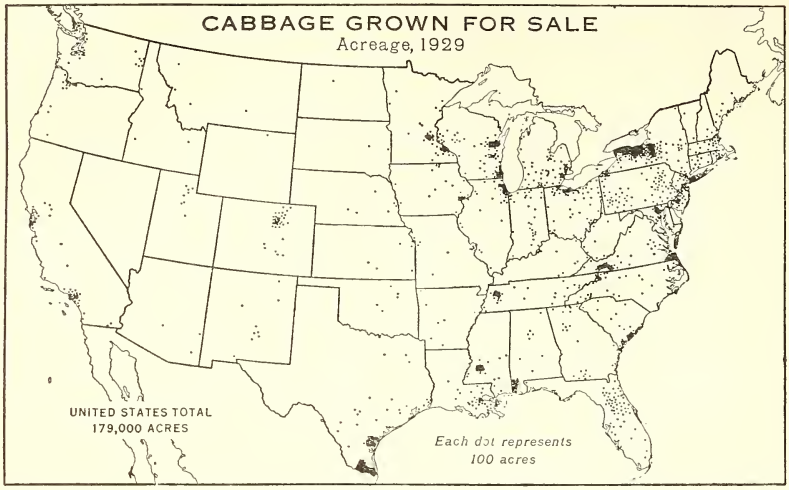


FIGURE 165.—The largest late-cabbage districts are in western New York and eastern Wisconsin. In these districts nearly two-fifths of the Nation's cabbage acreage is found, mostly on muck lands or the Clyde soils. Other important late districts are in Michigan, Ohio, Indiana, northern Illinois, Minnesota, Colorado, and western Oregon and Washington. Intermediate areas are Long Island, N. Y., southern New Jersey, near Baltimore, Md., southwestern Virginia, and Muscatine County, Iowa. Early cabbage is raised mostly in Texas, California, the Gulf States, the Carolinas, and Tidewater Virginia.

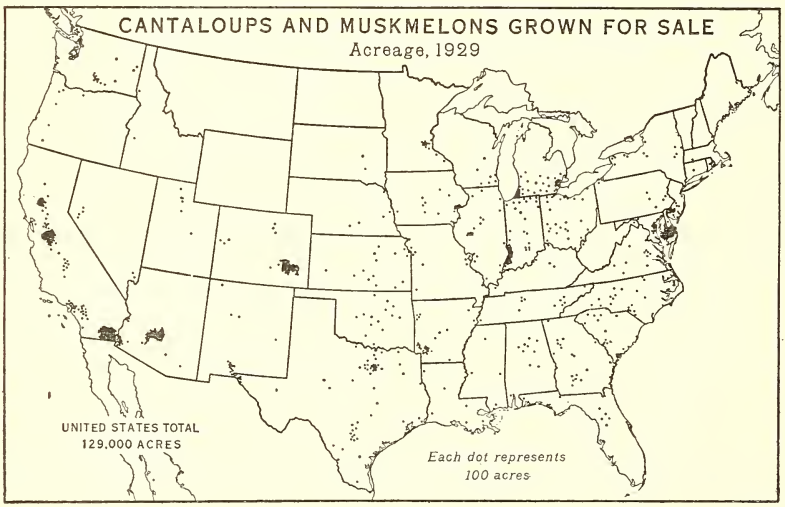
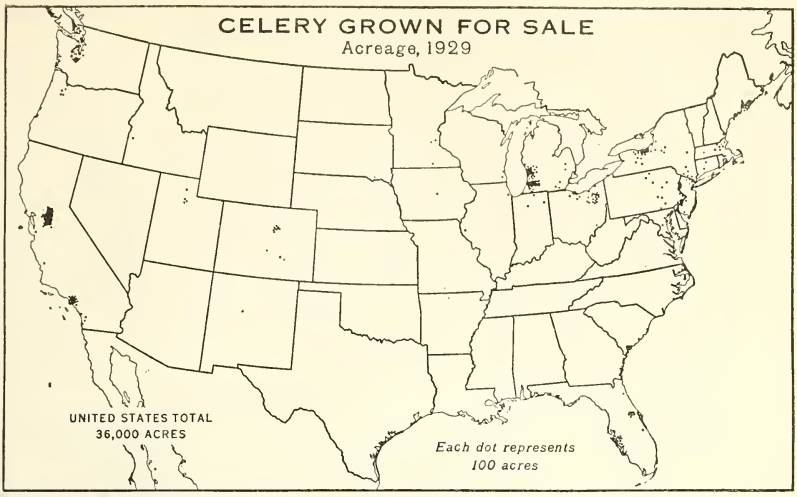
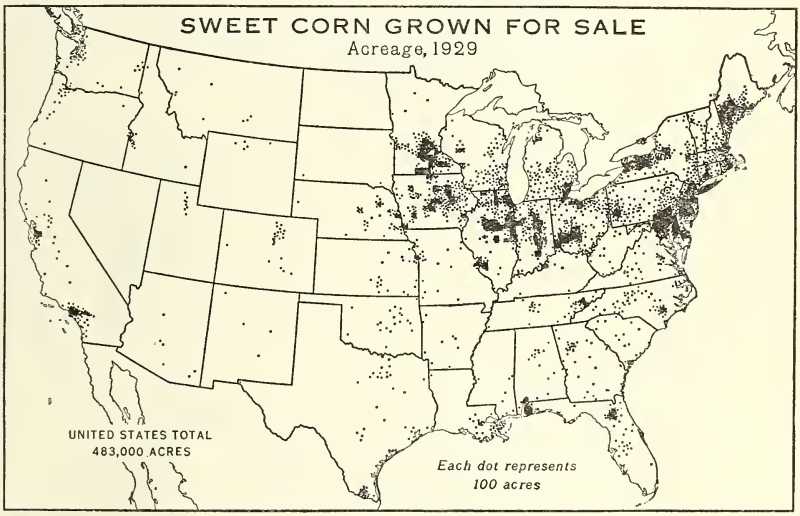


FIGURE 166.—The principal cantaloup-producing districts are now located in the West, California having one-third of the total acreage. The most important western districts are in Imperial, Stanislaus, Los Angeles, Merced, and Colusa Counties, Calif., around Phoenix, Ariz., and Rocky Ford, Colo. The principal eastern districts are located in the Eastern Shore of Maryland, and Delaware, in southern Michigan, along the lower Wabash River in Indiana, in southwestern Arkansas, and north-central Texas. A notable decline in acreage has occurred since 1924 in New Jersey and southern Georgia.



BAE 29926

FIGURE 167.—The principal areas of celery production are in New York, northern Ohio, Michigan, Florida, and California. Florida and California produce nearly all the early celery and half the country's total crop. In the Northern States the crop is produced mainly on muck or Clyde soils. Scattered acreages of celery are located where soil conditions are favorable in eastern Massachusetts, Connecticut, New Jersey, Pennsylvania, Indiana, Illinois, Minnesota, and in the vicinity of Denver, Colo., Salt Lake City, Utah, and Portland, Oreg.



BAE 29902

FIGURE 168.—Sweet corn is primarily an eastern, middle-latitude crop, but it is also extensively grown as far north as New York and Maine. New Jersey, Pennsylvania, Maryland, Ohio, Indiana, Illinois, Iowa, and the Lakes States report large acreages of sweet corn, most of which is canned. South of the Potomac and Ohio Rivers little sweet corn is grown, except in a few localities near the Gulf where corn for the northern winter market is produced. The sweet corn grown in California is mostly sold fresh in Los Angeles and San Francisco.

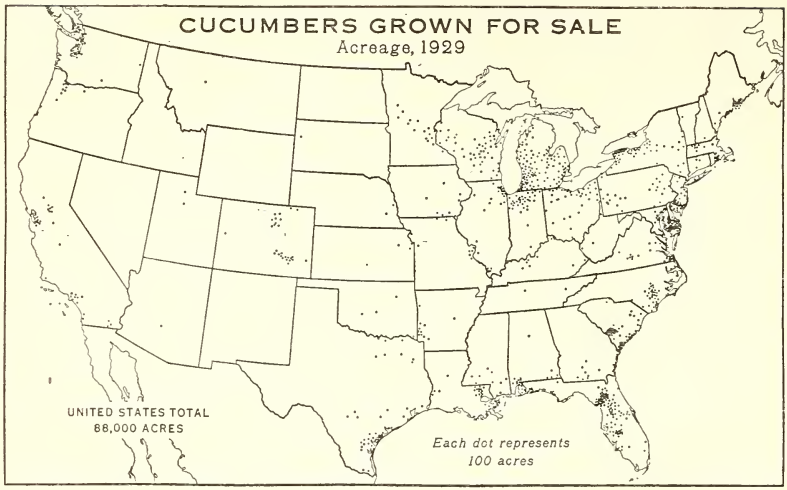


FIGURE 169.—Cucumbers sold for use fresh are grown mostly in Florida, the Carolinas, and the Eastern Shore of Maryland and Delaware, with Texas, Alabama, and New York important States in some years. The cucumbers for pickles are grown principally in Michigan, Wisconsin, Minnesota, Illinois, Indiana, Ohio, New York, Virginia, North Carolina, Mississippi, Louisiana, Texas, and Colorado. The California crop is used both fresh and for pickles. Cucumbers are grown generally on loams and sandy loam soils, in marked contrast to celery and cabbage.

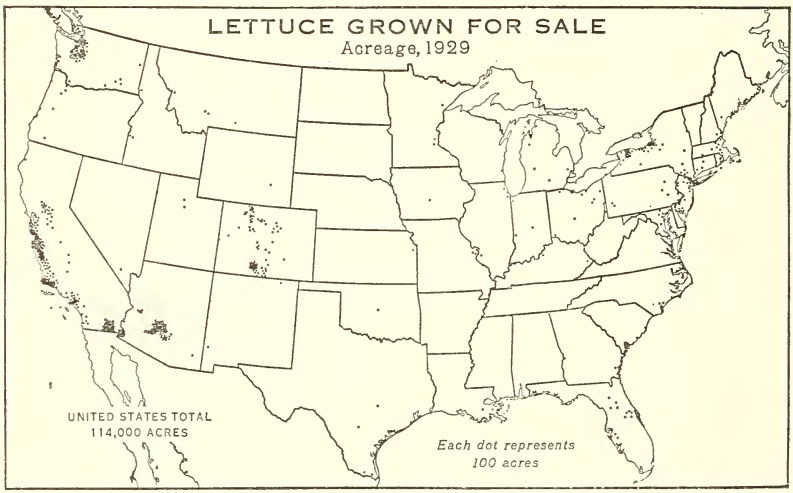
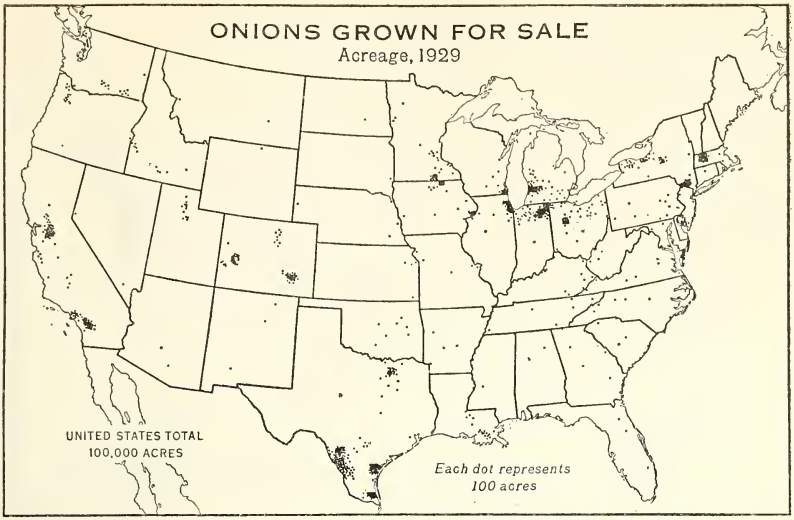
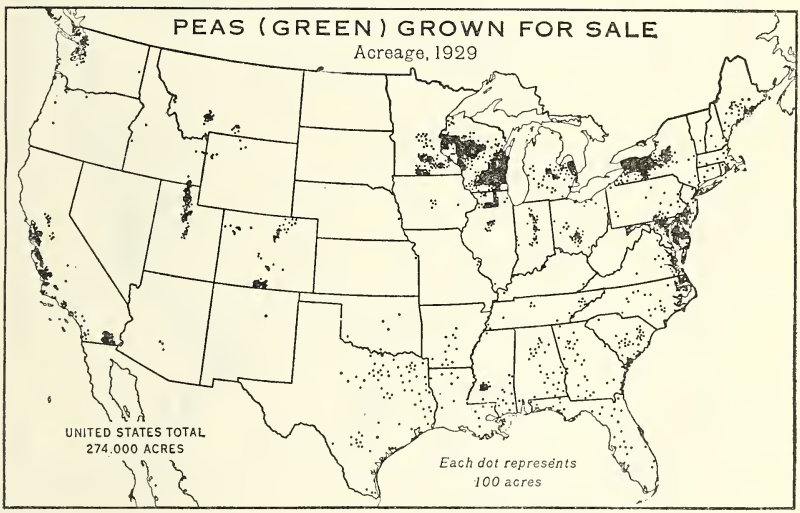


FIGURE 170.—Two-thirds of the commercial crop of lettuce is grown in California, mostly near the coast south of San Francisco, and in the Salinas Valley, along the coast of southern California, and in the Imperial Valley. Large quantities are produced in the Salt River Valley of Arizona and around Yuma. There are areas of some importance in Washington State, in the high valleys of Colorado, and in New York. With the development of the Iceberg type and the knowledge of vitamin values, lettuce has come to be used in winter as well as in summer by millions of families.



BAE 29702

FIGURE 171.—The commercial production of onions is largely concentrated in the Connecticut Valley of Massachusetts, Orange County and the Ontario lowland of New York, southern Michigan, Hardin County, Ohio, northern Indiana, Cook County, Ill., and southeastern Wisconsin, several counties in Iowa and Minnesota and in southern Texas (where the early, Bermuda onion is grown), the Arkansas and Uncompahgre Valleys of Colorado, and several counties in California. Many of these districts, but not all, have muck soils. Texas, Michigan, and New York ship half the Nation's commercial crop.



BAE 29846

FIGURE 172.—The production of green peas, primarily for canning, is concentrated in areas about Chesapeake and Delaware Bays, western New York, southern Michigan, southeastern and northwestern Wisconsin, southern Minnesota, the South Platte and San Luis Valleys in Colorado, the Utah oasis, the Puget Sound area and the Imperial Valley and coast of California. The many small areas in the South produce mostly early fresh peas for the northern cities. Peas, both fresh and canned, have increased rapidly in public favor and their production has become an important industry in many districts.

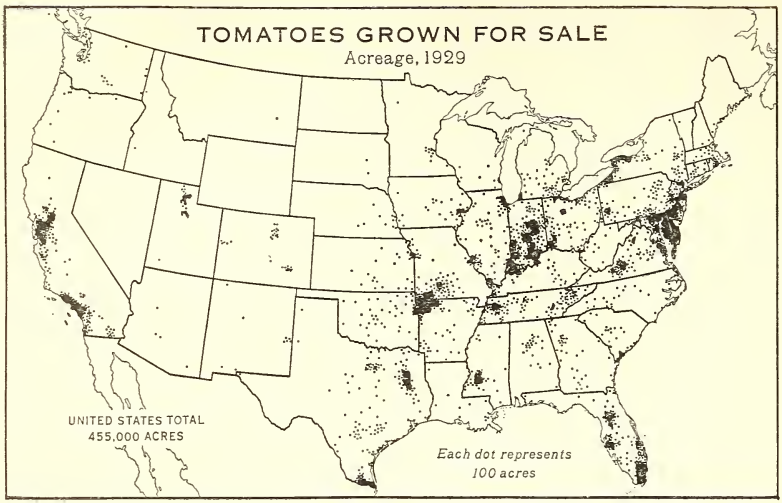


FIGURE 173.—Tomatoes are grown for sale in almost all parts of the United States, except in the Spring Wheat Belt, where the season is short. The eastern Maryland, Delaware, and southern New Jersey districts include over one-fifth of the country's acreage, while the New York, Virginia, Indiana, Ozark, and California districts are also important. Florida, southern Texas, and California produce the winter crop. Other important early-tomato districts are located in Copiah County, Miss., and Cherokee County, Tex.

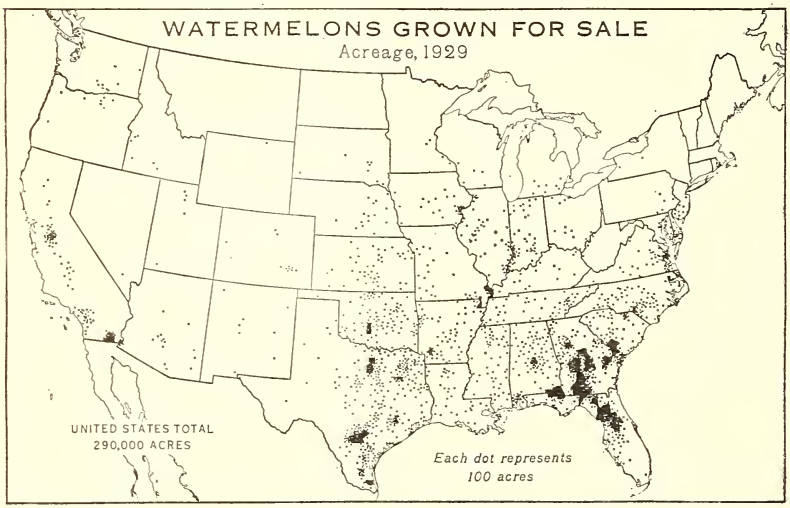
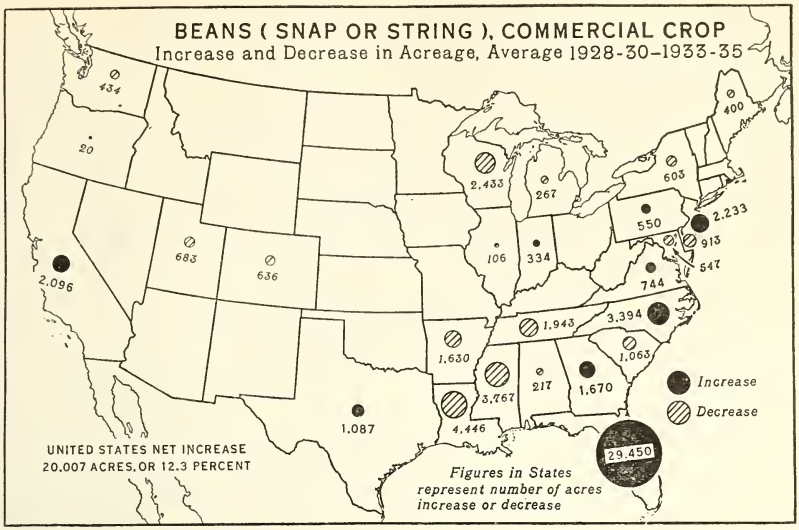
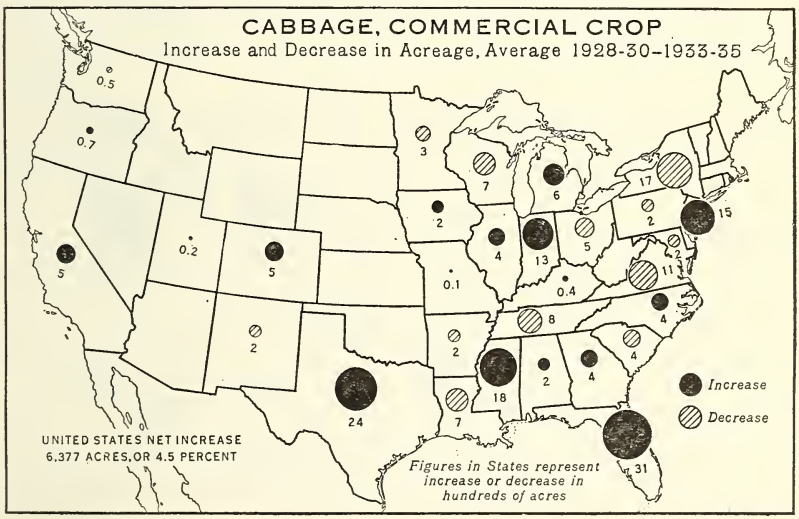


FIGURE 174.—The principal watermelon-producing districts are in the South. Georgia, the Carolinas, Florida, and Texas have more than half the Nation's acreage. The most important districts in Georgia center around Valdosta, Thomasville, Moultrie, and Macon; in Texas around Fort Worth and San Antonio. There also are important acreages in South Carolina, central Alabama, in southern Indiana and Illinois, Grady County, Okla., and Imperial, Los Angeles, and Stanislaus Counties, Calif. The season of 1929 was unfavorable for watermelons. In 1934 the national total was 417,000 acres.



BAE 31213

FIGURE 175.—Comparing the 3-year average acreage of the commercial crop of string beans for 1928–30 with that for 1933–35, it will be seen that the area of greatest increase was in Florida, with much smaller increases occurring in North Carolina, New Jersey, Georgia, Texas, and California. The principal increases took place on the Atlantic and Pacific coasts; in the Mississippi Valley decreases occurred in all States but one. Some of this decrease may have been caused by drought. The later period 1935–36 shows a substantial increase in acreage in the Mississippi Valley States.



BAE 31156

FIGURE 176.—The changes in acreage of the commercial crop of cabbage between these 3-year averages (5 years apart) show no geographic consistency in the North. New Jersey, Indiana, and Michigan showed fairly substantial increases, whereas New York, Ohio, Wisconsin, and Minnesota reported decreases. In the early-cabbage territory of the South the changes were in the direction of larger acreage, particularly in Florida, Mississippi, and Texas. California and Colorado also increased the cabbage acreage about 500 acres each.

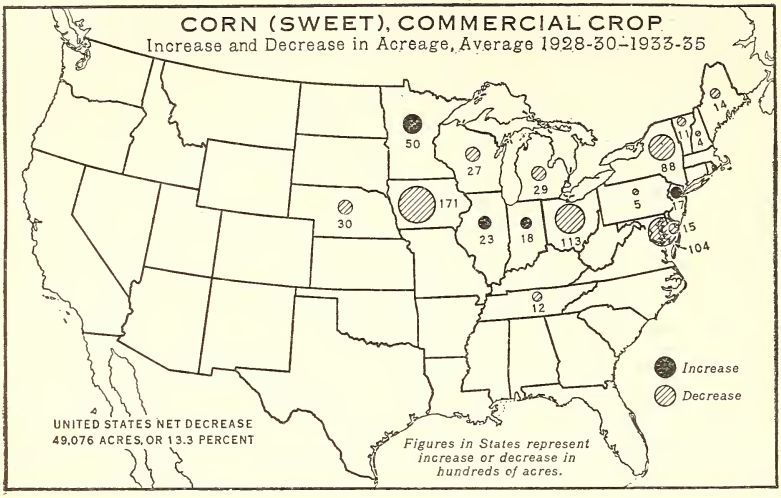


FIGURE 177.—The commercial acreage of sweet corn, unlike that of most truck crops, decreased between 1928–30 and 1933–35. The decreases were greatest in New York, Maryland, Ohio, and Iowa. The decreases in these States, except Maryland, can be attributed largely to summer drought in 1934. Increases occurred in New Jersey, Indiana, Illinois, and Minnesota. In the United States as a whole the commercial acreage of sweet corn apparently declined about 13 percent in this period.

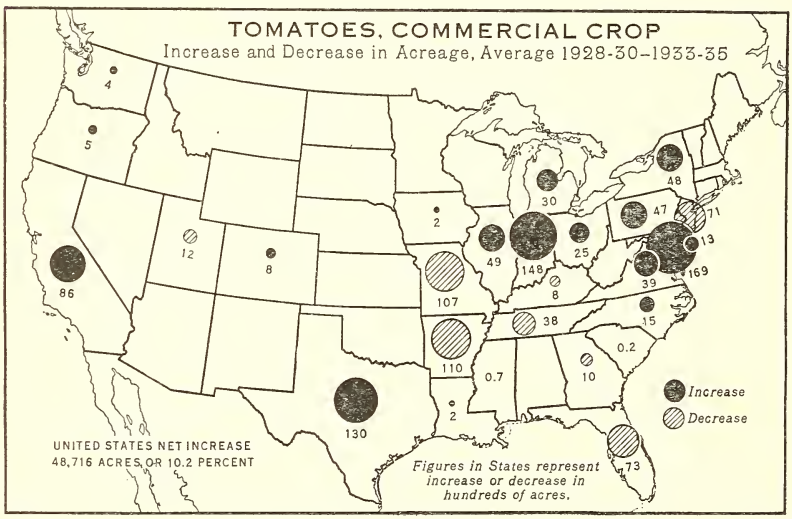


FIGURE 178.—The commercial acreage of tomatoes increased 10 percent between 1928–30 and 1933–35 in the Nation as a whole. The States having the largest increases were Maryland, Indiana, Texas, and California. All the Northeastern States, except New Jersey, reported an increase in tomato acreage, whereas Missouri, Arkansas, and Tennessee reported decreases, doubtless largely because of drought in 1934. In Florida, as in New Jersey, a notable decrease is indicated, for reasons that are not clear.

FRUITS AND NUTS

The land in "fruit orchards, vineyards, and planted nut trees" plus that in small fruits totaled 6,473,000 acres in 1929, which was only about one-tenth that in wheat or hay. But the value of the fruits and nuts totaled $656,000,000, which was about 78 percent of that of the wheat crop and 66 percent of that of the hay crop. The value of the fruits and nuts in that year was about two-thirds of that of potatoes, sweetpotatoes, and vegetables combined, and the acreage was about the same. The acreage in fruit apparently has not changed greatly for years, but with the elimination of farmers' orchards by disease and old age, and gradual concentration of production in commercial orchards, there has been a trend toward higher yields per acre.

The trend in total consumption of fruit per person, though fluctuating widely from year to year, has remained more or less horizontal since the beginning of the century, at least. But a notable shift has occurred from apples to citrus fruit. The per-capita consumption of apples has decreased from between 70 and 120 pounds a year during the pre-war years, varying with the season, to less than 60 pounds, on the average, during the last decade. The consumption of citrus fruits has increased from about 10 pounds annually at the beginning of the century to more than 40 pounds, on the average, during the last 5 years. The per-capita consumption of oranges has increased fourfold in the third of a century, and of grapefruit from almost nothing to nearly 10 pounds. Consumption of grapes has increased from about 20 pounds a year at the beginning of the century to more than 30 pounds during most of the last 10 years, and the proportionate increase is similar for pears (4 to 5 pounds in the pre-war period to over 6 pounds in recent years), and prunes (5 or 6 pounds 25 years ago to an average of 8 pounds recently). Per-capita consumption of peaches, has remained more or less stationary, except for fluctuations from year to year.

The impression is general that the marketing organization for citrus fruit, which has kept the market continuously supplied throughout the year, and has made the public aware of the vitamin content and other advantages of citrus fruit, has been an important factor in the substitution of citrus for apples and other fruit.

The production of almonds in California increased rapidly during the years of the World War and reached a peak in 1926. But since 1932 the trend has been downward. Imports declined rapidly during the depression and per-capita consumption apparently fell 40 percent. The production of walnuts (English, French, or Persian), grown mostly in California and Oregon, likewise increased rapidly during the World War. A peak was reached in 1927 and again in 1935. But imports declined rapidly during the depression and per-capita consumption fell fully a third. The production of pecans likewise increased during the World War, but the increase was more rapid from 1922 to 1926. Production was very large in 1931 and 1935, and per-capita consumption during the depression was much higher than in pre-depression years. In 1936 it was about three-fourths of a pound per capita, which considerably exceeds that of almonds and walnuts combined.

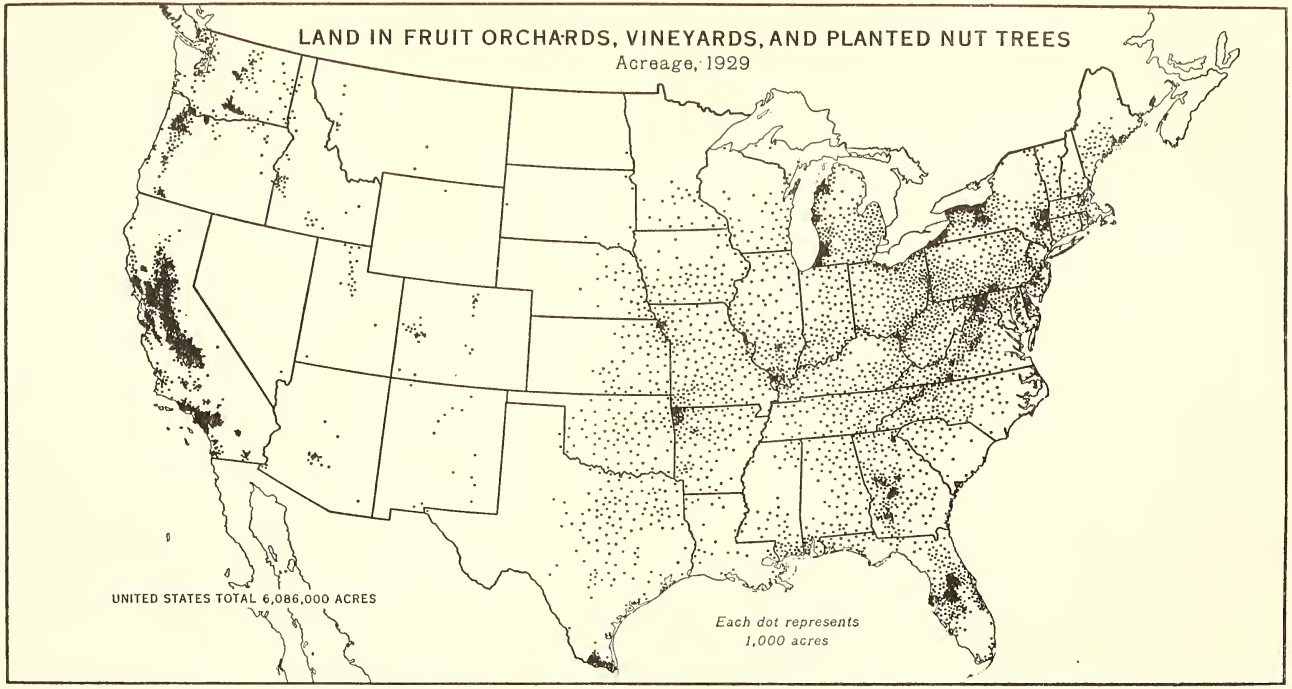
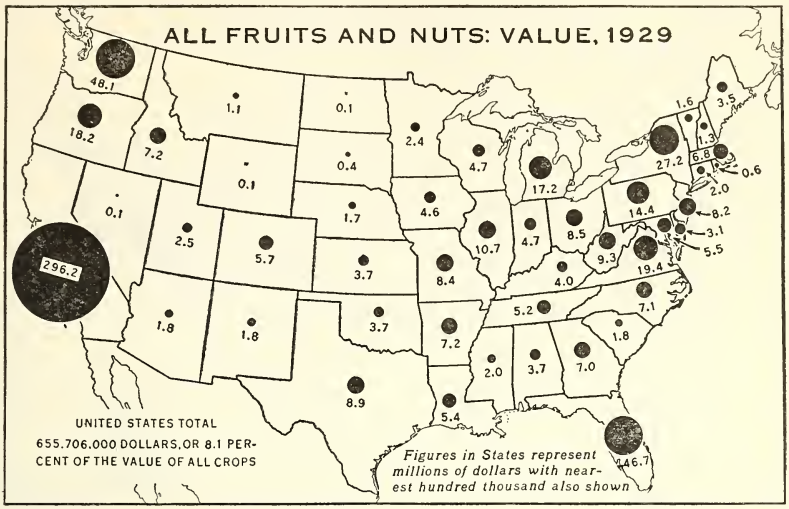
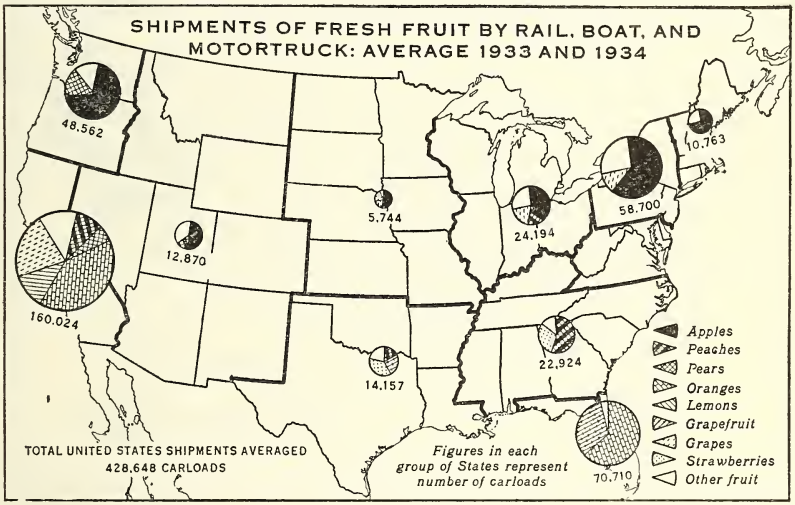


FIGURE 179.—California contributes one-fourth of the Nation's acreage of fruits and nuts and nearly one-half of the value. Southern California grows mostly citrus fruits, walnuts, grapes, and apricots; central and northern California produce grapes, peaches, apricots, plums, and prunes, with some citrus fruits and pears in the foothills, and apples near the cool coast. The dots in Florida on this map represent mostly citrus fruits; those in the Cotton Belt, especially in Georgia, peaches; and those in extreme western New York and western Michigan, apples, grapes, and peaches. Elsewhere with few exceptions, the apple is the dominant fruit. Almost no fruit is grown in the Great Plains, because of the dry winters and occasional summer drought.



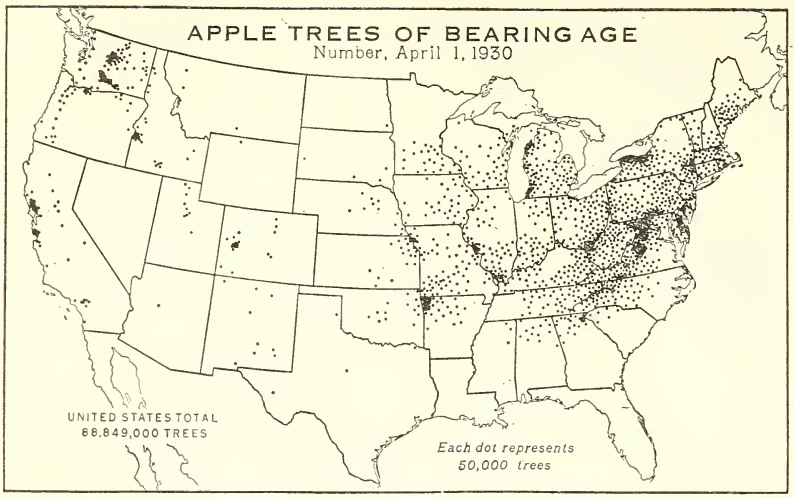
BAE 31243

FIGURE 180.—The fruit and nut crops of California in 1929 had a farm value 10 times that of New York and 45 percent of that of the entire Nation. Most of the fruit is shipped nearly across the continent. The three Pacific States produced considerably more than half the Nation's fruit, measured by value. The Appalachian region, extending from northern Georgia to Maine, and the adjacent Piedmont, produced about one-sixth of the Nation's crop. Florida and the Cotton Belt each produced about one-fourteenth and the Great Lakes region about one-fifteenth.



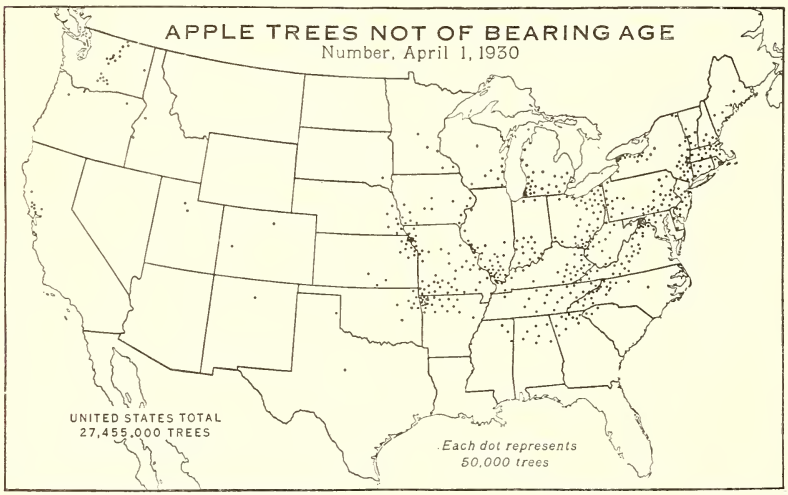
BAE 31656

FIGURE 181.—California and Florida contributed over half of the Nation's shipments of fruit. Citrus, principally oranges, constitute half the shipments of fruit from California and nearly all those from Florida. The quantity of citrus fruit shipped exceeded that of apples from all producing points in the country. Grapes rank next to citrus and apples in importance, constituting one-fourth of the shipments in California and smaller proportions in the Great Lakes group of States. Fruits included in "other fruits" on the map vary from region to region and may include any of the fruits listed above.



BAE 25433

FIGURE 182.—Most of the apple trees in the East are located in the Appalachian Mountain and Piedmont region, and around the shores of the Great Lakes where spring frosts are less injurious than in the interior, because of the lake influence or mountain air-drainage protection. The southern limit of the apple region extends only a little beyond the northern limit of cotton, and the western or moisture limit is about the same as that of timothy. Most of the apple trees of the West are in irrigated valleys.



BAE 25434

FIGURE 183.—The young orchards not yet bearing in 1930 included nearly one-third as many trees as the bearing orchards. The more extensive planting of the young trees coincided in a general way with the areas of present production, but there are more young trees relative to bearing trees in southern Indiana and Illinois, the Ozarks and the Missouri Valley, and relatively fewer in the Appalachian and Great Lakes regions. Plantings in the valleys of the far West and along the California coast also had become relatively small by 1930.

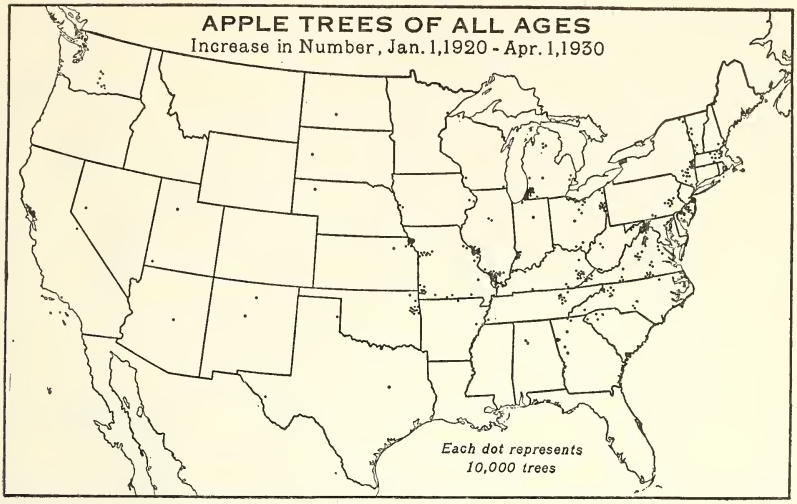


FIGURE 184.—The increase in total number of apple trees between 1920 and 1930 was small and highly localized. A few counties in New England, New York, and New Jersey, in the lower Shenandoah Valley, in the Piedmont and the Cumberland Plateaus, in southwestern Michigan, southern Illinois, and Missouri, also Sonoma County, Calif., and Yakima County, Wash., almost complete the list of significant increases. During this decade the tendency was strongly toward reduction in the number of apple trees in most parts of the country. Disease and age were large factors in this reduction.

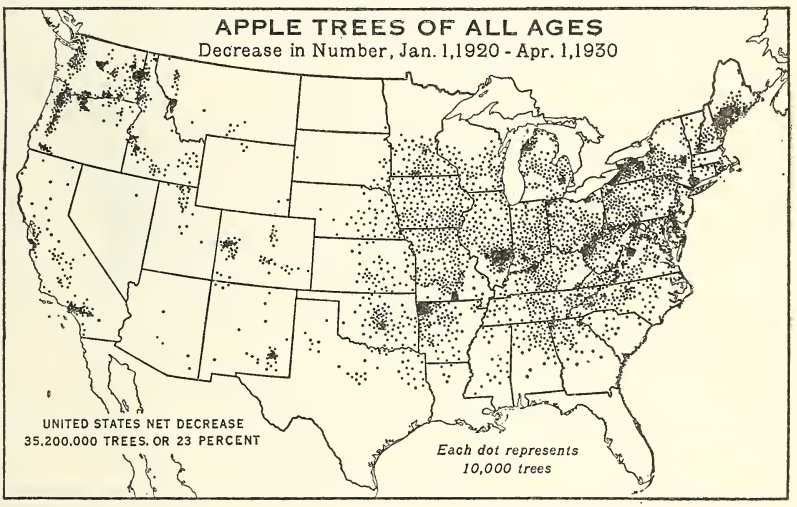


FIGURE 185.—There was nearly one-fourth fewer apple trees in the United States in 1930 than in 1920. Particularly heavy was the decline in southern Maine, western New York (except two counties), the upper Ohio Valley, south-central Illinois, and the Ozark district of Arkansas. In the apple districts of western Oregon and Idaho and in most of those in Washington a notable decrease occurred mostly of trees of bearing age. Old, unproductive trees, mostly in farm orchards or on unsuitable sites, were cut down and generally not replaced with young trees.

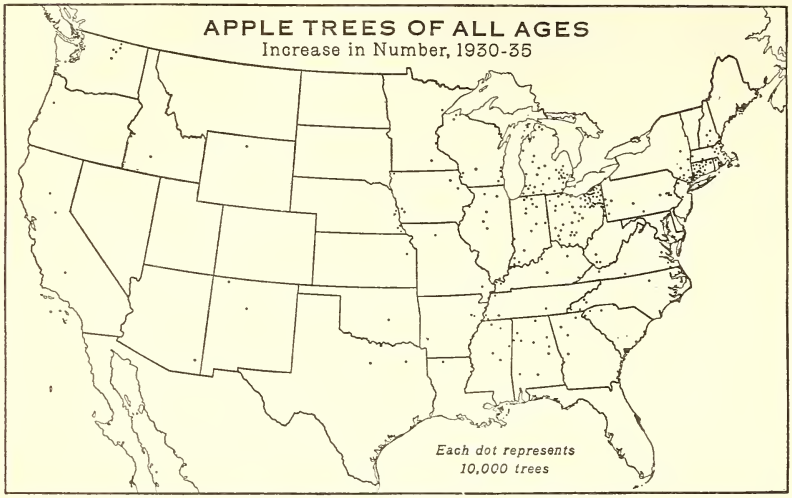


FIGURE 186.—The general decline in number of apple trees continued through the depression years, 1930–35, except that the plantings exceeded the elimination of old trees in southern New England and southeastern New York, also in most of Ohio, Michigan, and Alabama, and in parts of Indiana, Illinois, Wisconsin, and eastern Nebraska. As in 1920–30, the increase was small compared with the decrease (fig. 187). There were 17,500,000 apple trees not of bearing age reported by the census in 1935, or about 10,000,000 less than 5 years before. The depression retarded planting.

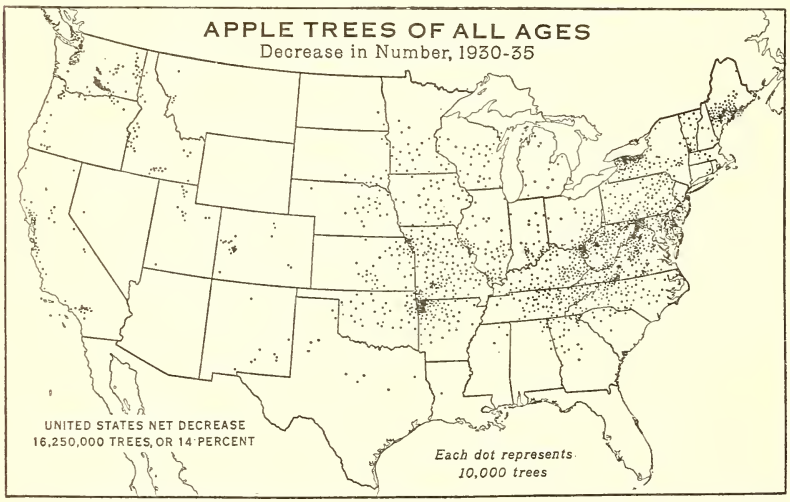
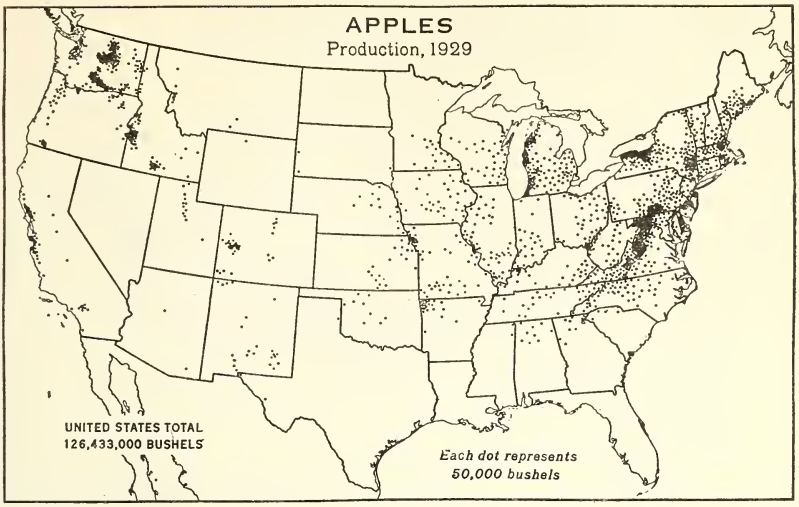
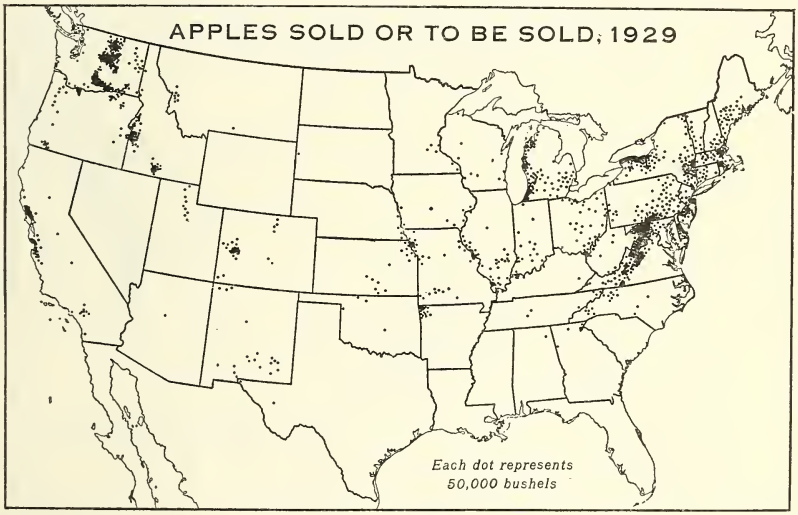


FIGURE 187.—A further decline in total number of apple trees occurred between 1930 and 1935 in most of the apple-producing regions. The retarded plantings of young trees during the depression and the increased destruction that resulted from the extremely low temperatures of the winter of 1933–34 in certain regions, which killed old as well as young trees, and other causes resulted in a net decrease of more than 16,000,000 trees. The greatest decline occurred in six areas—southern Maine, western New York, the southern Appalachians and piedmont, the upper Ohio Valley, northwestern Arkansas, and the Yakima Valley in Washington.



BAE 29906

FIGURE 188.—The 23-percent decrease in trees of bearing age between 1920 and 1930 was associated with a 7-percent decrease in production of apples between 1919 and 1929. During the next 5 years trees of bearing age decreased 7 percent more, but production decreased only 2 percent. The heaviest producing areas in 1929 were the Appalachian and upper Piedmont extending from Pennsylvania to North Carolina, the Ontario shore and the Hudson Valley of New York, the various New England districts, the Lake Michigan shore of Michigan, and the valleys of central Washington, and southern Idaho.



BAE 31116

FIGURE 189.—The extent to which apples have become a commercial crop is revealed by comparing this map with figure 188. In parts of New England and the hills of southern New York, in the lower Piedmont of Virginia, and in most of West Virginia, North Carolina, Tennessee, Kentucky, Missouri, northern Illinois, Wisconsin, and Minnesota, the apple crop evidently was consumed largely on the farms. But as insects and diseases have attacked the farm orchards, and as the trees have grown older, production for home use has declined.

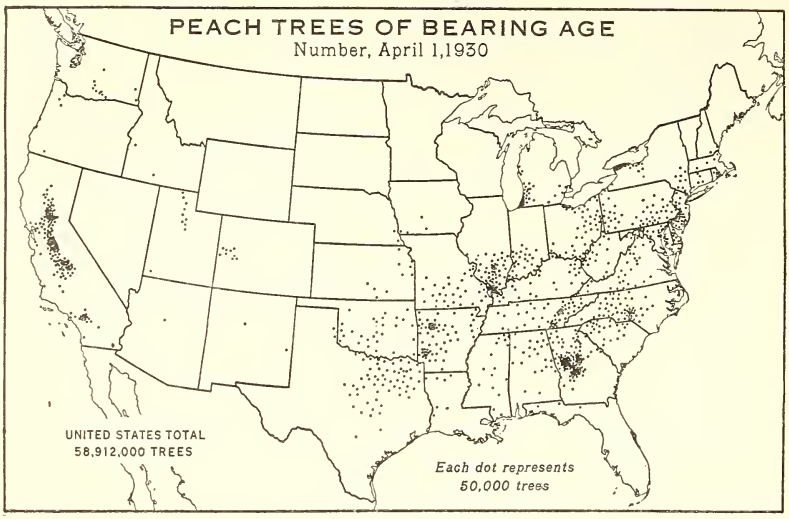


FIGURE 190.—The two leading peach areas are the great valley of California and central Georgia. Nearly one-third of the peach trees of bearing age are in these two States. Both are early-peach districts, but the California crop is mostly canned. Less important districts are located in southern California, in southwestern and northwestern Arkansas, in eastern Tennessee, south-central North Carolina, southern Illinois, southwestern Michigan, and the Ontario shore of New York. Cold, dry winters prevent peach production northwest of a line drawn from Chicago to Omaha and thence to Amarillo, Tex.

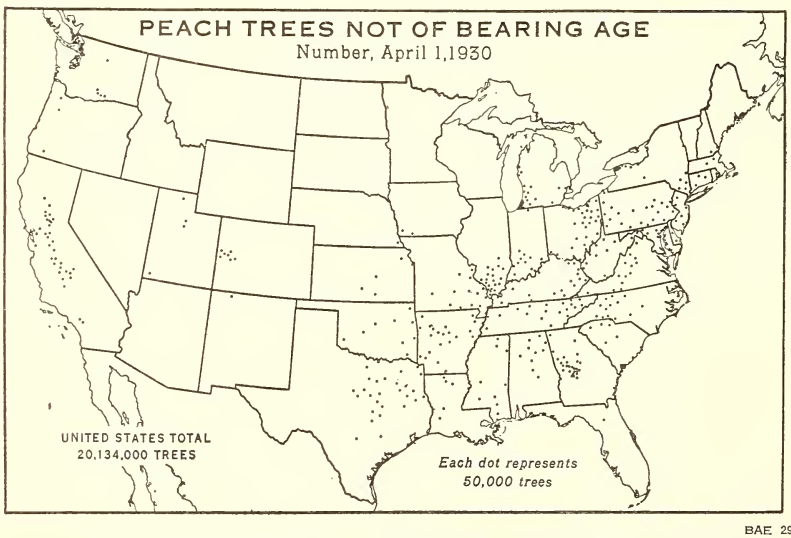
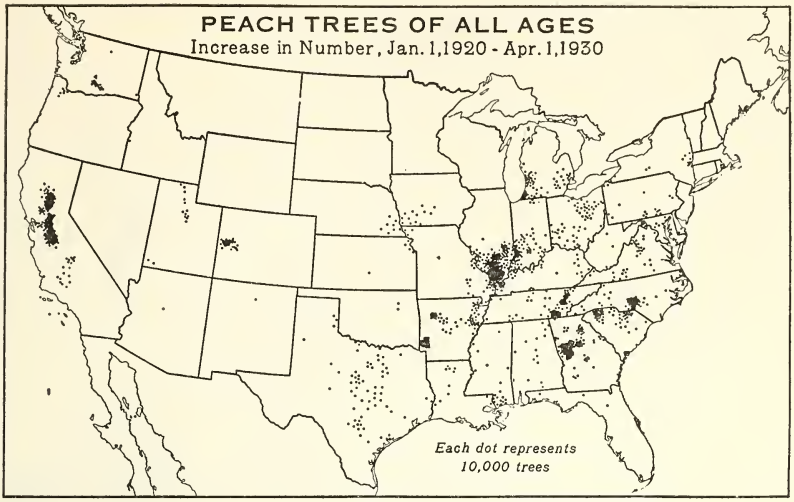
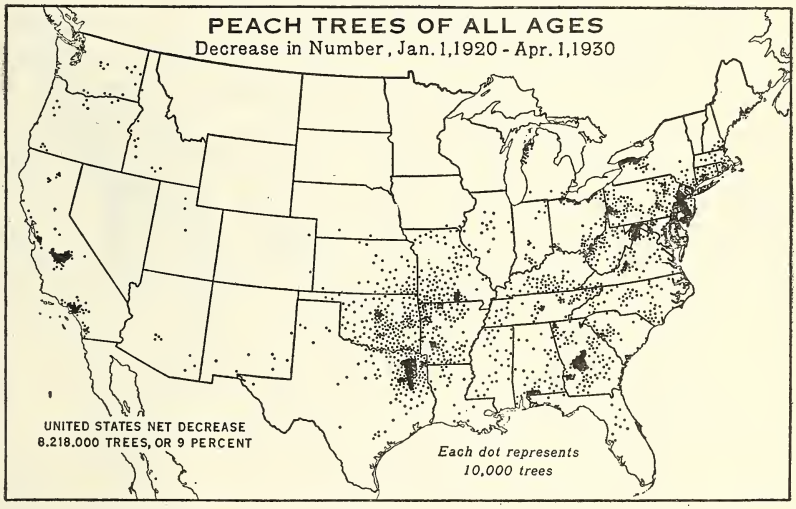


FIGURE 191.—Peach trees not of bearing age were about one-third as numerous as those of bearing age in 1930 (fig. 190). They were located in much the same areas, but relative to the number of bearing trees, they were sparse in both California and Georgia but numerous in Kentucky, Illinois, Indiana, Ohio, Michigan, New York, and the Virginias. Both maps show the location of peach districts on the leeward shores of the Great Lakes, where winter temperatures are moderate and growth in spring is retarded until danger from frost is past.



BAE 29959

FIGURE 192.—The number of peach trees of all ages more than doubled in Illinois between 1920 and 1930, and increased materially in Indiana, Michigan, and the Carolinas; also in north-central Georgia, in northeastern and southwestern Arkansas, and in the Sacramento and lower San Joaquin Valleys in California, western Colorado, and the Yakima Valley of Washington. But the trend in the country as a whole, as with apple trees, was downward during the decade. However, the number of peach trees increased slightly between 1920 and 1925, the decline occurring after 1925.



BAE 29960

FIGURE 193.—In the period 1920–30 the peach industry underwent some shrinkage. Two or three severe freezes within this period caused the killing of a large number of old trees and prices of peaches were such as to discourage replantings. There was a notable decrease in number in eastern Texas and south-central Georgia, in the northern Virginia and Maryland area, in New Jersey and eastern Pennsylvania, in western New York, and the northern portion of the peach belt in Michigan, in the Ozark area, and in southern California.

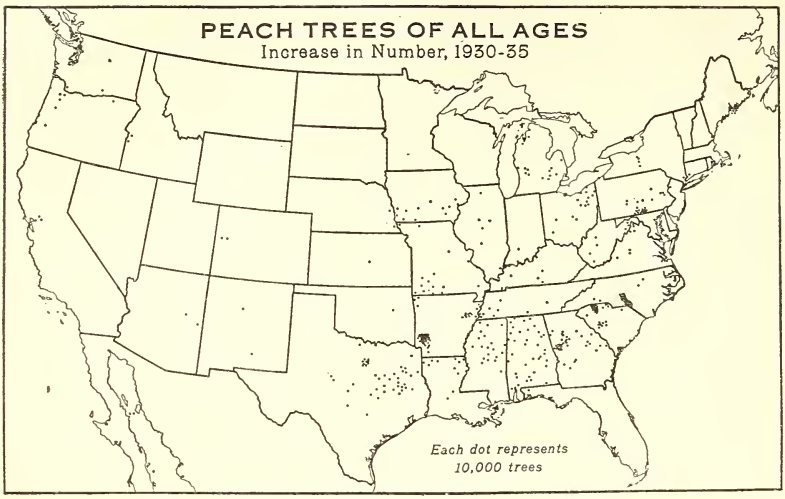


FIGURE 194.—During the 1930–35 period the number of peach trees in the country as a whole continued to decline, but in a few districts the increase was notable. The major increases were in Howard, Pike, Hempstead, and St. Francis Counties, Ark.; Meriwether County, Ga.; Spartanburg County, S. C.; Scotland, Richmond, Moore, and Montgomery Counties, N. C.; and Adams and Franklin Counties, Pa. Smaller increases occurred in many counties of eastern Texas, Mississippi, Alabama, Ohio, Michigan, Iowa, and the Ozark area.

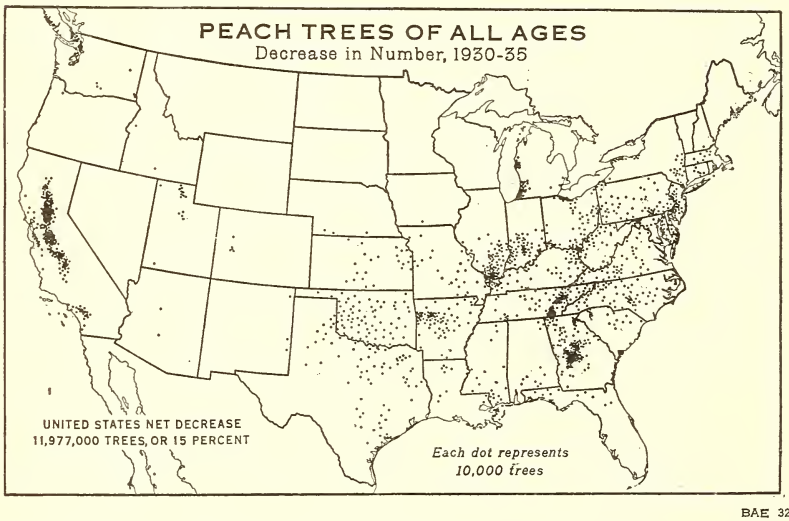


FIGURE 195.—The 1930–35 period was unfavorable for producers of peaches. In the first place, it included two or three seasons of extremely low and discouraging returns for their fruit. In the second place, it included the winter of 1933–34, one of record severity, which killed thousands of fruit trees both young and old throughout the East. The chief areas of decline in number of peach trees were in Georgia, eastern Tennessee, southern Illinois, the southern Ozarks, and California. There were also widespread but scattered decreases in many of the other peach areas.

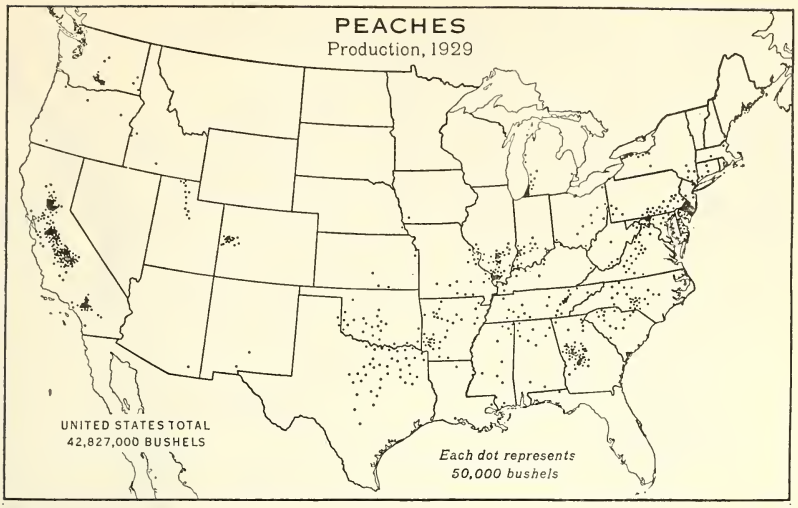


FIGURE 196.—California is by far the largest producer of peaches. Normally it grows from one-third to one-half of the country's crop, but the 1929 crop was poor. California produces nearly all the peaches for canning. Georgia generally ranks second in peach production with a crop one-fourth that of California, but the 1929 crop was only half of normal. Other important centers of production are in southern New Jersey, the Appalachian Mountains and the Piedmont, the Ontario shore of New York, and the Michigan shore of Michigan, southern Illinois and Indiana, upland Arkansas, and eastern Texas.

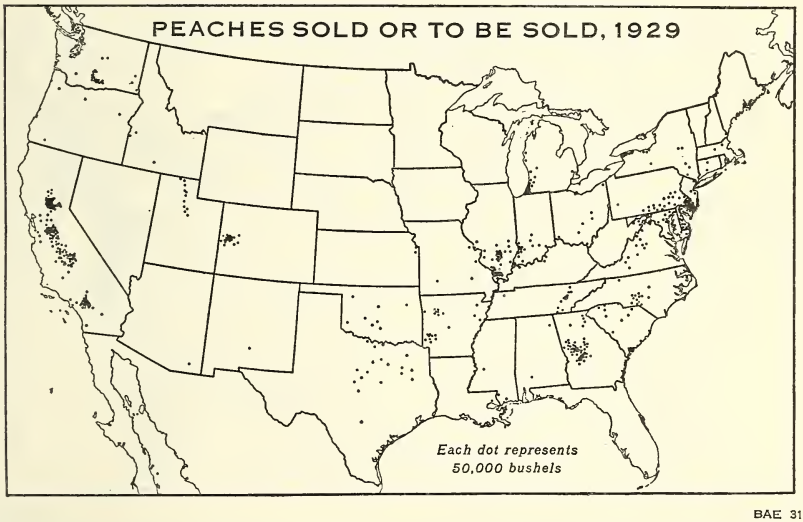


FIGURE 197.—The commercial peach crop of 1929 was grown principally in California, Yakima County, Wash., the Utah oasis and the western Colorado valleys, central Georgia, southern Illinois and Indiana, southwestern Michigan, southern New Jersey and Delaware, with a small production reported in the southern Appalachians and Piedmont districts, in Arkansas, Texas, and Oklahoma.

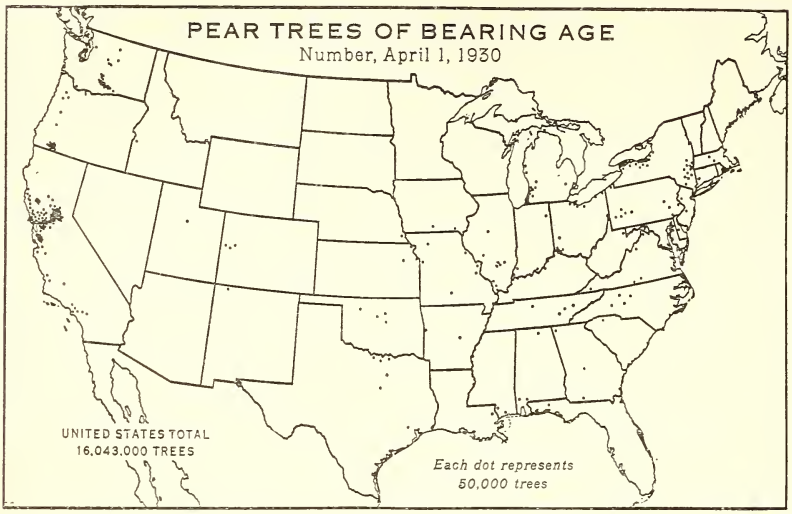


FIGURE 198.—The number of pear trees of bearing age in the United States is less than one-third of that of peach trees and only one-fifth of that of apple trees. The principal pear-producing districts are the foothills of central California, the Rogue River Valley of Oregon, the Yakima Valley of Wash., Berrien and adjacent counties in Michigan, the Ontario shore of New York and the Hudson Valley. As with peaches, it will be noted that pears are not a distinctly northern crop, but like most fruits, commercial production has developed in districts moderately free from temperature extremes.

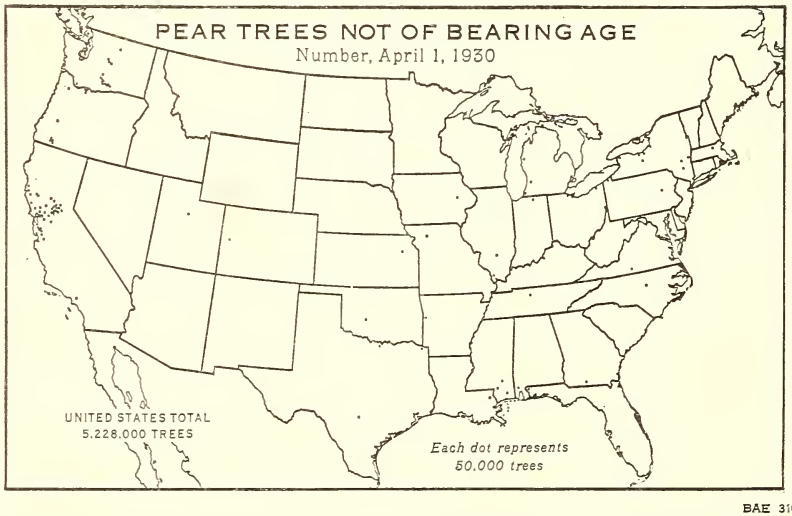
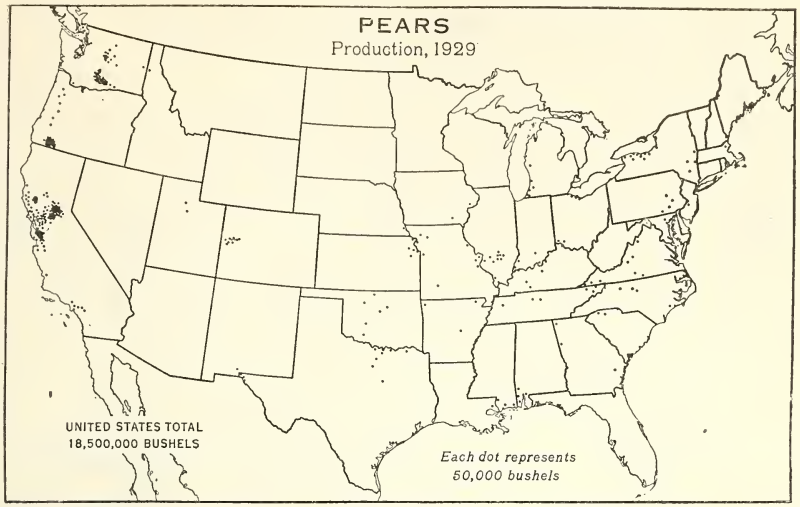
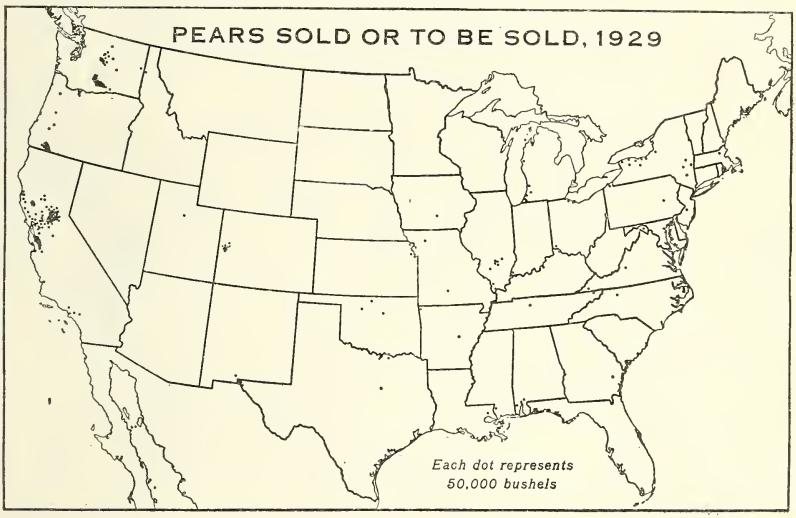


FIGURE 199.—The plantings of young pear trees, as shown by the 1930 census, were chiefly in the Pacific Coast States. The bay counties of California, including Mendocino, and the eastern foothills of the Sacramento Valley, also the irrigated fruit valleys of Oregon and Washington, contain most of the plantings. Scattered acreages of young pear trees were found in New York, Michigan, and southern Mississippi. Apparently the Pacific Coast States were fully maintaining their leadership in the industry.



BAE 29958

FIGURE 200.—In 1929, as in most years, two-thirds of the Nation's pear crop was grown in the Pacific Coast States. The principal producing districts in the East are the Ontario shore of New York, the Lake Michigan shore of Michigan, the Appalachian Mountains and Piedmont from Pennsylvania to Georgia, southern Illinois, the Missouri Valley north of Kansas City, central Oklahoma, north-central Texas, and the Gulf shores of Mississippi and Alabama. There is a small center of production in the irrigated Rio Grande Valley near El Paso, Tex., and in the valleys of western Colorado.



BAE 31118

FIGURE 201.—The Pacific Coast States produced nearly all the commercial crop of pears in 1929. These western pears are produced mostly under irrigation and a high quality of fruit is obtained. As the bulk of these pears moves to the eastern trade, and as pears are more perishable than apples or citrus fruits, they are very carefully packed and are shipped under favorable conditions, many of them in refrigerated cars. It is now possible to buy Pacific coast pears in almost any large eastern market over a period of about two-thirds of the year. Much of the California crop is canned.

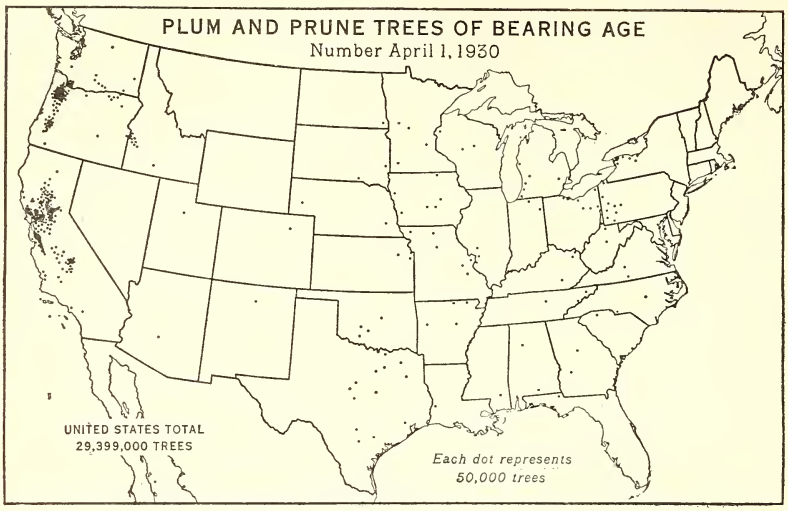


FIGURE 202.—More than one-half of the Nation's plum and prune trees are in California, and two-thirds of these are in the five counties of Santa Clara, Sonoma, Napa, Solano, and Placer. A large acreage also is grown in Marion, Polk, and Yamhill Counties in the Willamette Valley, and the Umpqua Valley to the south in Oregon, and in Clark County, Wash. Prunes, dried for the market, constitute nearly the entire production in these States. The scattered dots in the eastern half of the United States in the map represent plums, almost entirely consumed fresh or canned.

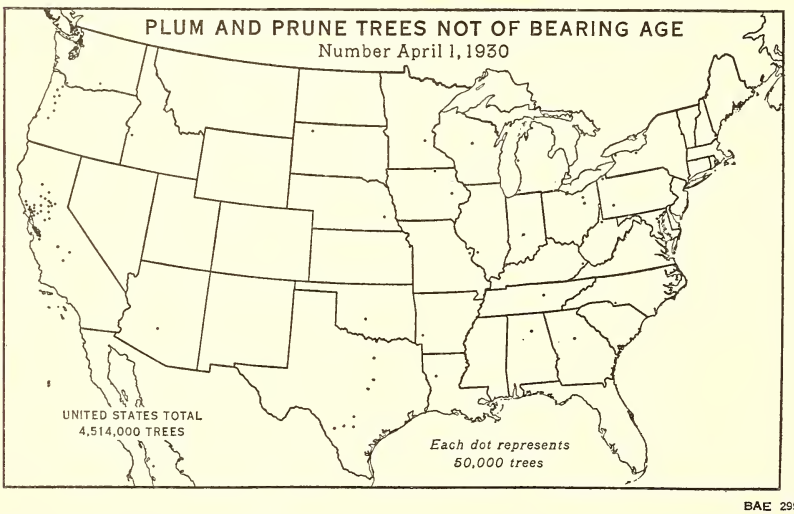


FIGURE 203.—The largest plantings of prune trees during the years just before the depression took place in the bay district of California, particularly Santa Clara County. This county, which has been the leading prune-producing county in the Nation for many years, has had several "ups and downs" in the industry, associated with changes in price. The acreage of young plum trees in other parts of the country was small and mostly noncommercial. Texas reported several hundred thousand young trees; and Iowa, Michigan, New York, Ohio, and Pennsylvania each about 100,000.

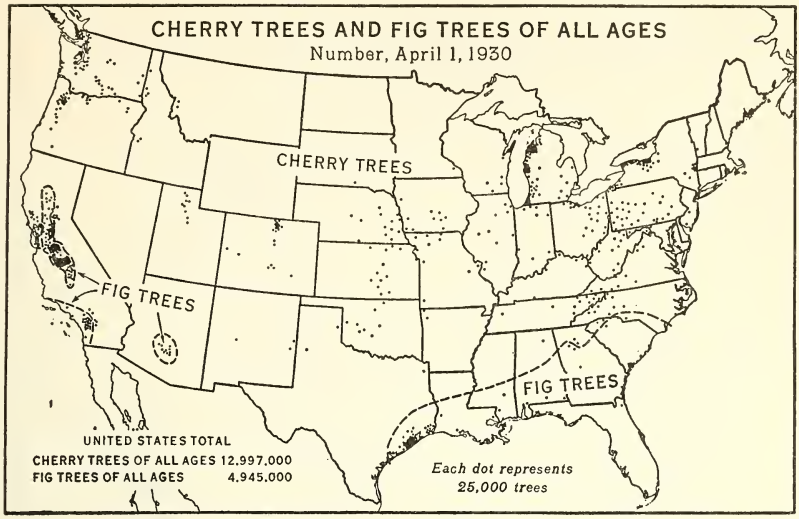


FIGURE 204.—The four great centers of cherry production are western New York, western Michigan, the Door Peninsula in Wisconsin—areas of ameliorated climate—and a series of districts in the Pacific Coast States. In California, cherries, like apples, are grown in the cooler locations. In the West nearly all cherries are sweet, in the East most are sour. Figs are grown in warmer climates, mostly in California, Arizona, and along the Gulf coast of Texas. A few trees producing for home use are grown in many parts of the South. California figs are sold dried, fresh, and canned.

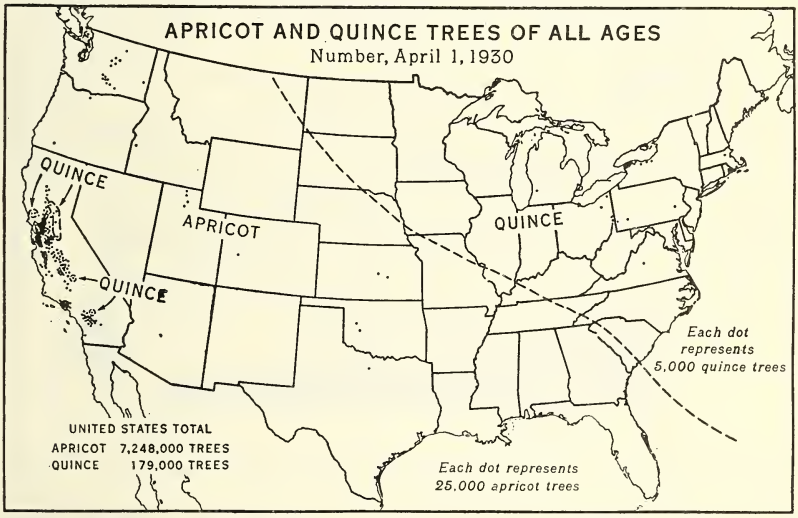


FIGURE 205.—Although apricot trees are reported in the census from every State, except Minnesota and Wyoming, commercial production is almost confined to the warm valleys of California and central Washington. Over 90 percent of the crop is produced in California and most of it is dried. Quinces are grown in the cooler, humid northeastern portion of the Nation, notably in western New York. But the census reported 43,000 trees in California and a few in every other State. The quince is not used to any extent as fresh fruit, but for preserves, jelly, and fruit flavor.

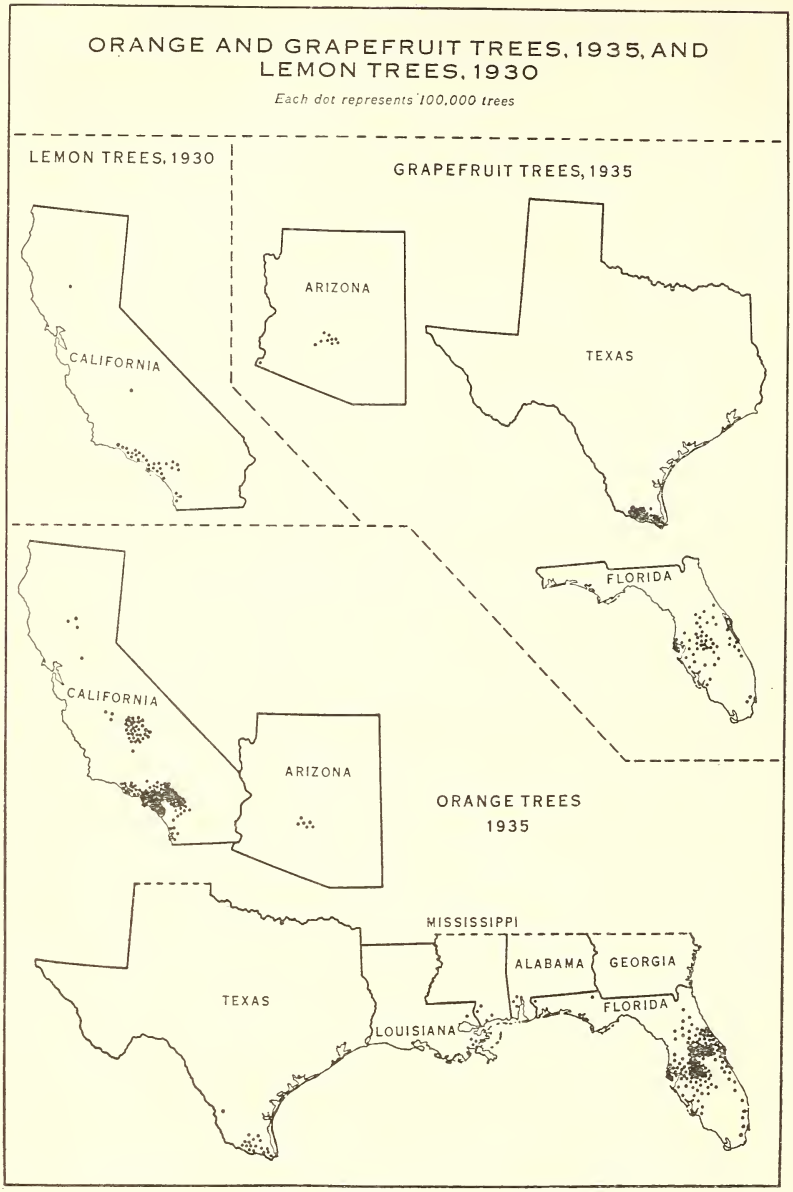


FIGURE 206.—Practically all the citrus fruit is grown in California, Arizona, Florida, and the Gulf coast. California produces two-thirds of the oranges and Florida nearly one-third. California produces nearly all the lemons. Florida produces two-thirds of the grapefruit, with Texas exceeding California in production in recent years, and Arizona rapidly approaching California. In all, nearly 39,000,000 orange trees were reported in 1935, over 13,000,000 grapefruit trees, and in 1930, over 3,000,000 lemon trees. Production of citrus fruit, from a few small areas, now equals that of the commercial production of apples in the entire Nation.

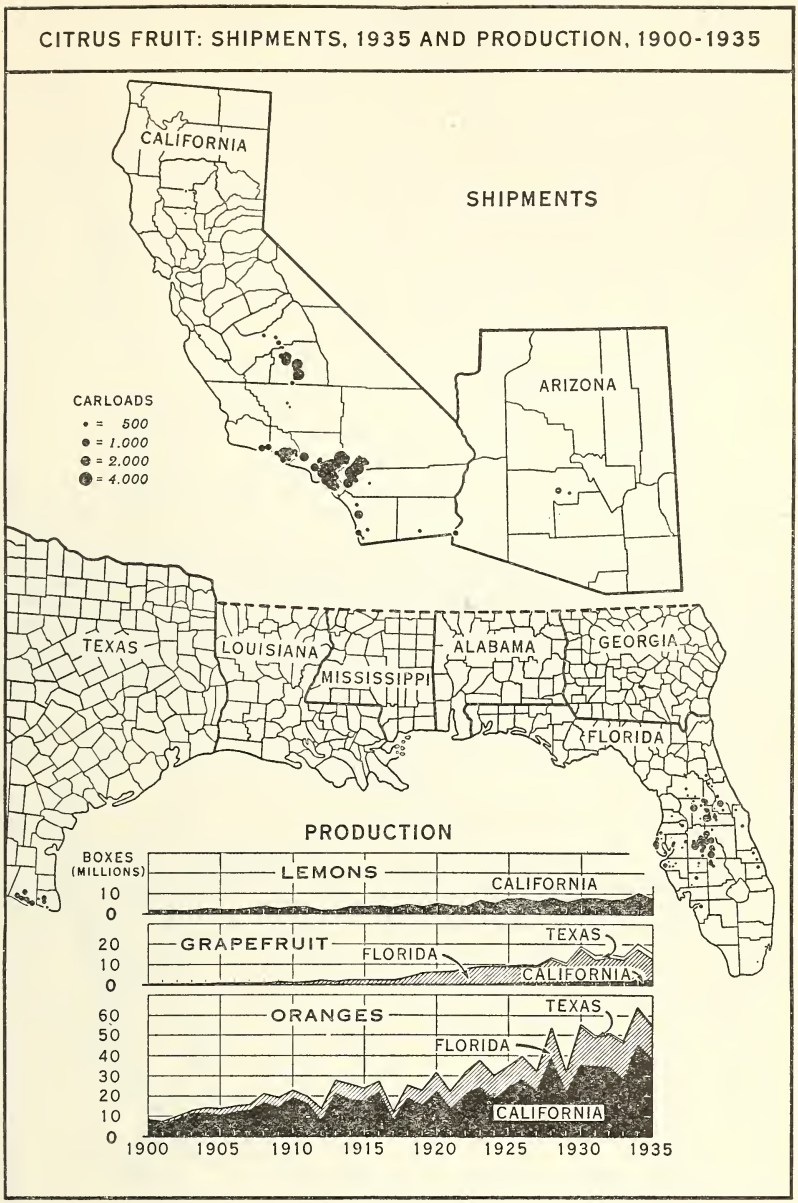


FIGURE 207.—The present relative importance of the citrus-producing districts is made clearer by this map showing shipments by stations of origin based on data collected by the Federal Bureau of Agricultural Economics. The dominant position of southern California is evident, and the unimportance of the Gulf States, except Florida and Texas. The graph below shows the trend of production of the three fruits in the three important States.

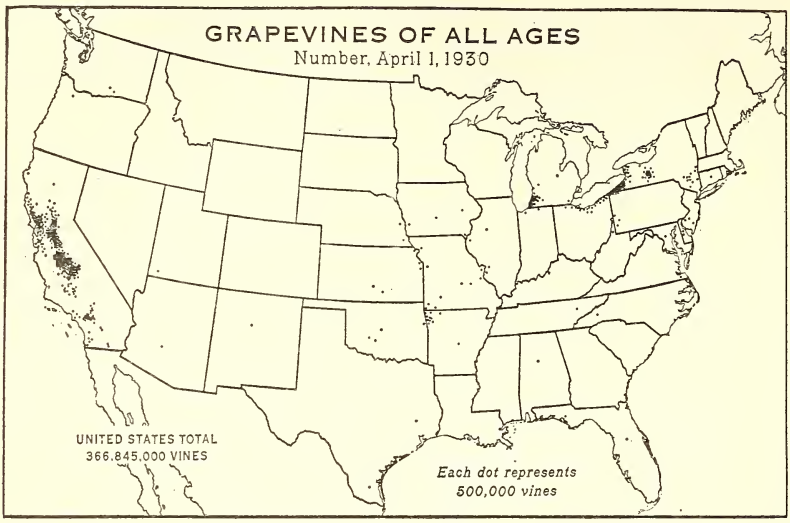


FIGURE 208.—About three-fourths of the Nation's grapevines are in California. The raisin district centers around Fresno where the sunshine is almost continuous. Wine grapes are more widely distributed, many being grown in the San Francisco Bay counties. Table grapes are grown in both the San Joaquin and Sacramento Valleys, and in southern California. In the East the principal grape districts are in western New York, and extend along the southern shore of Lake Erie. Minor centers are located in the southwest corner of Michigan in northwestern Arkansas, and in southwestern Missouri.

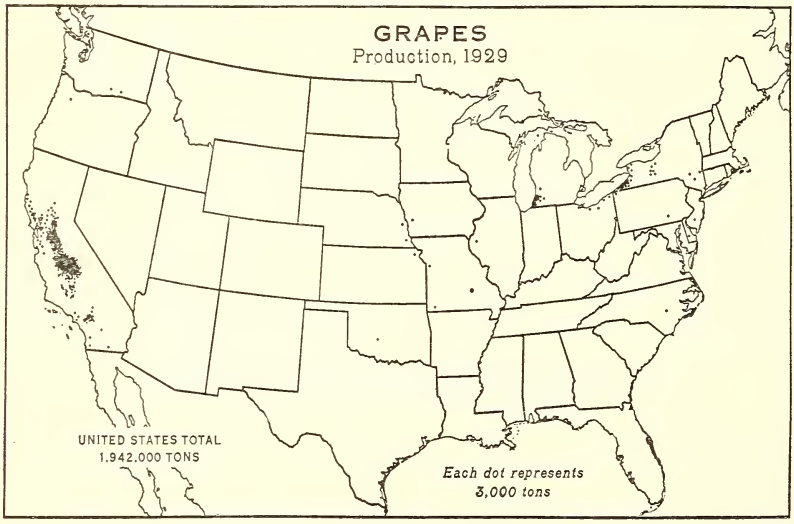
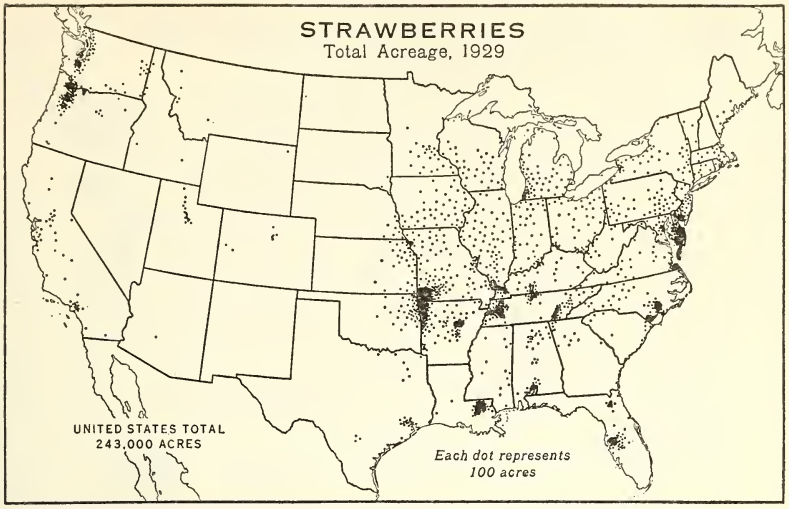
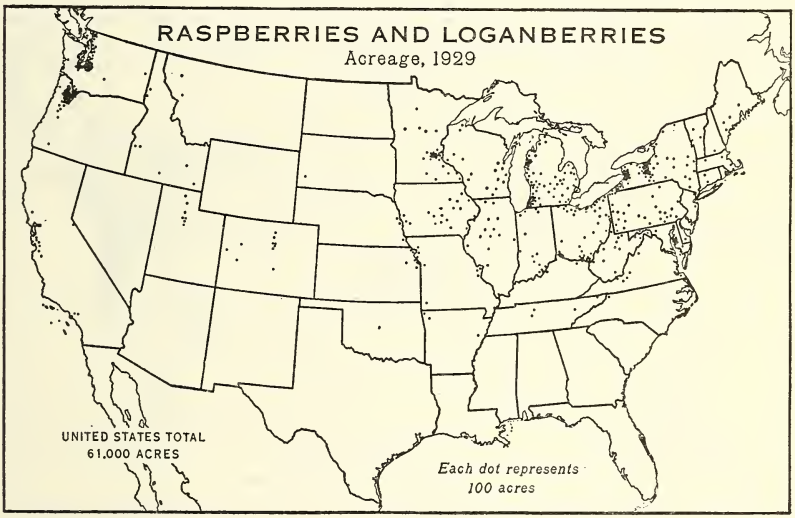


FIGURE 209.—Nearly nine-tenths of the Nation's grape production is in California—about 2,000,000 tons in the average year. About 22 percent of the California tonnage is of wine varieties, 18 percent table varieties, and 60 percent raisin varieties of which only about three-fourths are dried. The eastern grapes, produced principally in New York, Pennsylvania, Ohio, and Michigan, are mostly consumed fresh or made into grape juice. Shipments of grapes by train and boat from California, as well as from the Great Lakes belt, declined greatly during the depression.



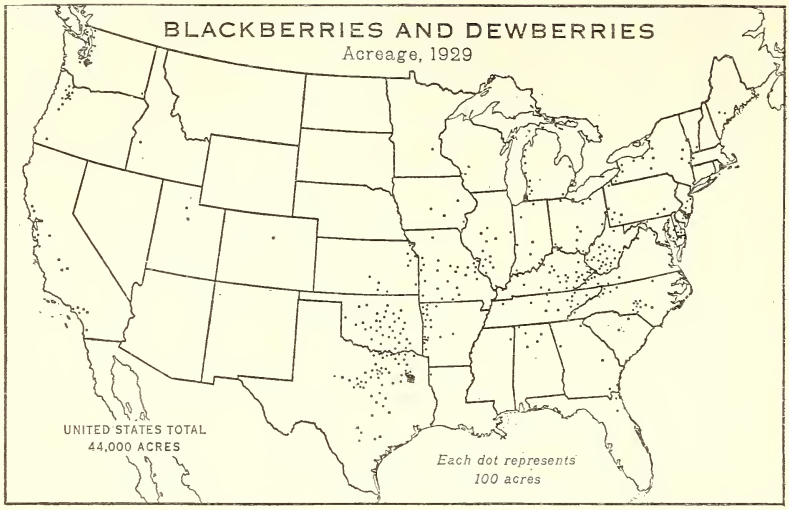
BAE 28248

FIGURE 210.—The centers of early strawberry production are around Tampa, Fla., in Cullman, Conecuh, and Escambia Counties, Ala., and in Tangipahoa, and Livingston Parishes, La. As the season advances northward the districts in eastern North Carolina, in Tennessee, and White County, Ark., begin shipping and still later the large Ozark district, southern Illinois, and the very important Norfolk-Eastern Shore district, and later southern New Jersey. Producing areas of the late crop are widely scattered, only western Michigan and the North Pacific coast showing notable concentration.



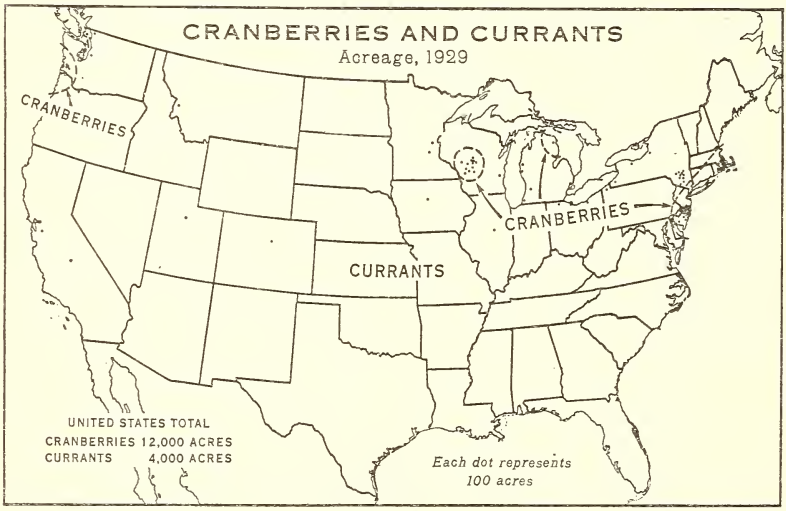
BAE 31047

FIGURE 211.—The bulk of the raspberry acreage is in four States—New York, Ohio, Michigan, and Minnesota. Most of the *loganberries* are on the North Pacific coast, principally in the Willamette Valley of Oregon and the Puget Sound district of Washington. Few raspberries are grown south of the Potomac and Ohio Rivers, except at comparatively high elevations in the southern Appalachians where the climate is cooler. Most of the raspberries of the Northeastern States are used as fresh fruit, but a large percentage of the Pacific coast loganberries are canned or made into juice.



BAE 31045

FIGURE 212.—Blackberries are grown in general further south than raspberries. The principal areas of production are in northeastern Texas, Oklahoma, the Ozarks, and the southern Appalachians. In western New York, western Michigan, the north Pacific coast, and elsewhere both raspberries and blackberries are grown. The few blackberries in the southeastern States suggest that this scarcity may be due to lack of adaptability to the climatic conditions. Dewberries are grown largely in North Carolina, the Hudson Valley, and southwestern Michigan.



BAE 31044

FIGURE 213.—The few thousand acres of currants in the country are located mostly in the lower Hudson Valley and on the leeward shores of the Great Lakes, with a few acres on the Pacific coast. Cranberry production is limited to districts where peat is underlain by sand and water is available to flood the bogs as needed. The most important area is found in Plymouth and Barnstable Counties, Mass., a large area is in central New Jersey, and smaller areas are in Wisconsin, Washington, and Oregon.

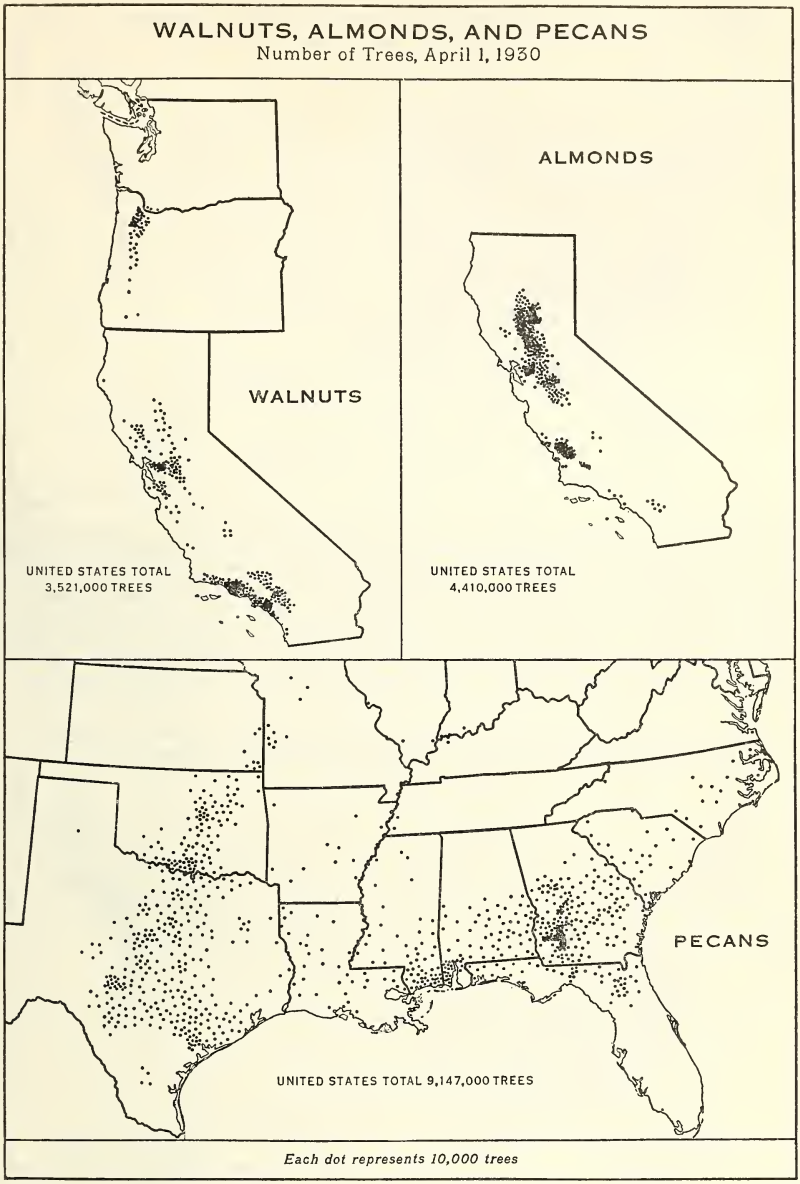


FIGURE 214.—Almonds and walnuts are grown almost entirely in the Pacific States and principally in California. Pecans, on the other hand, are a product principally of the Southern States from Texas to the Carolinas but also extend northward to southern Indiana, Illinois, and Missouri. Much of the pecan crop in Texas and Oklahoma is from wild trees. Walnuts (English, French, or Persian) are produced in southern California, the valleys of central California, and in the Willamette Valley of western Oregon. Almonds are grown mostly on the foothills of the Great Valley and in San Luis Obispo County, Calif.

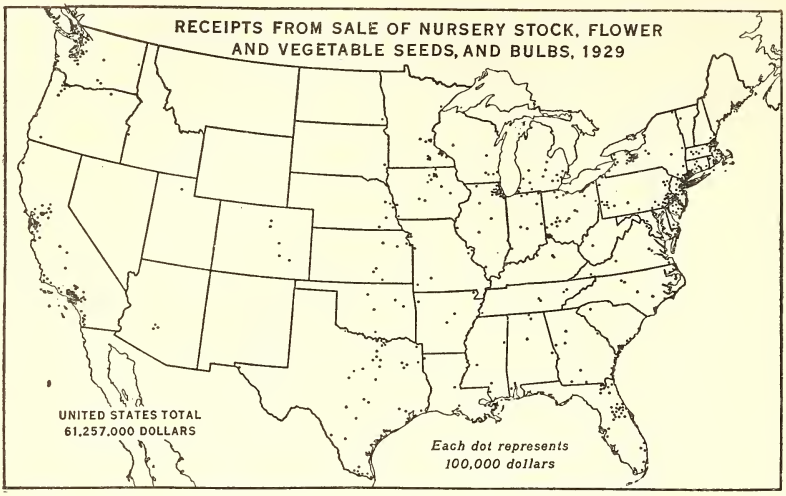


FIGURE 215.—The Bay Counties and Los Angeles County, Calif., supply most of the nursery stock for that State and most of the flower and vegetable seeds for the United States. The lower Rio Grande Valley in Texas and central Florida also supply much subtropical nursery stock. In the North and Northwest, districts adjacent to New York City and Rochester, N. Y., Philadelphia and Pittsburgh, Pa., Cleveland and Cincinnati, Ohio, Chicago, Ill., Portland, Oreg., Seattle and Bellingham, Wash., are prominent. These suburban districts supply nursery stock, except the Bellingham district, which supplies bulbs.

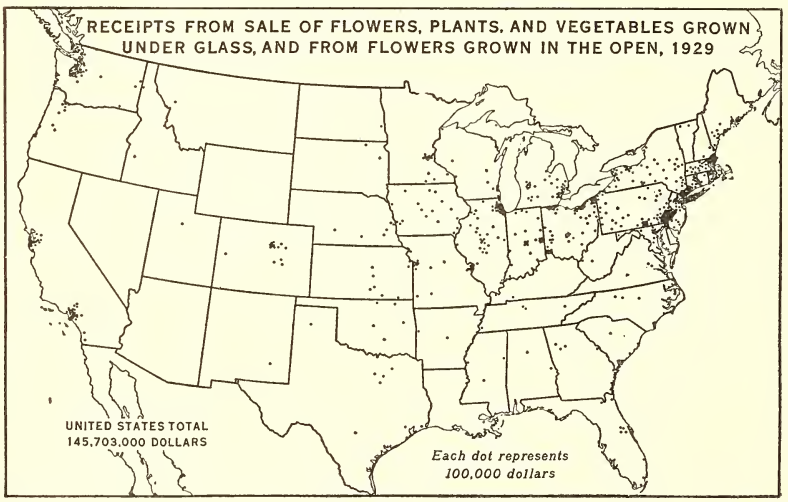
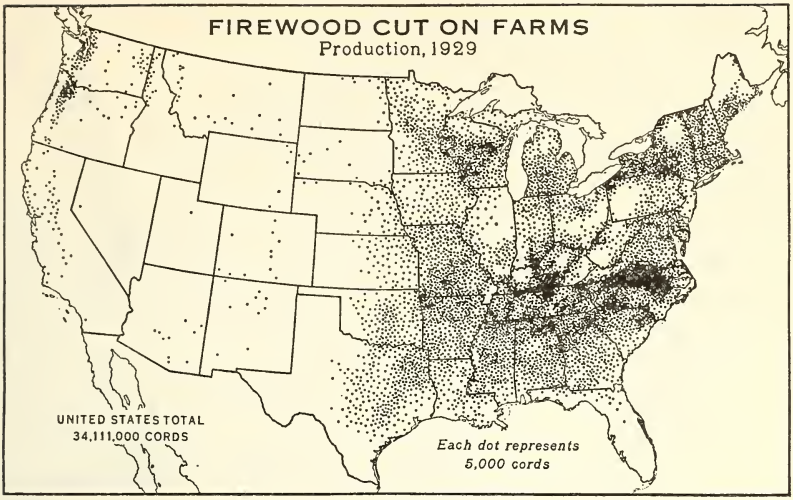
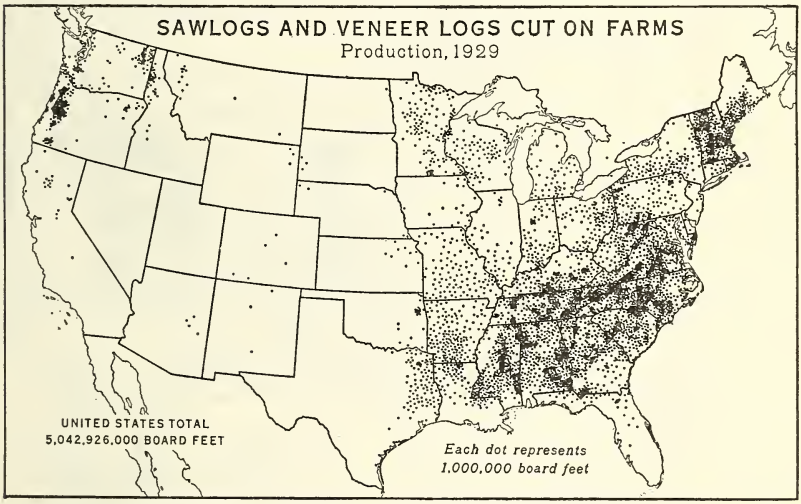


FIGURE 216.—Most of the greenhouse products and cut flowers are produced in the northeastern quarter of the country adjacent to the large cities. The major belt of production includes the Atlantic coast from Baltimore to Boston. Next in importance is the Great Lakes belt from Rochester to Chicago and Milwaukee. Then come the river cities—Cincinnati, St. Louis, Kansas City, Omaha, St. Paul, and Minneapolis. More important, however, are the Pacific coast cities—Los Angeles, Greater San Francisco, Portland, and Seattle. Lastly, three inland cities deserve notice—Denver, Indianapolis, and Columbus.



BAE 31077

FIGURE 217.—The cutting of firewood by farmers is general in the originally forested portions of the country. The greatest quantity is cut in the densely populated areas along the northern margin of the Cotton Belt from North Carolina to Arkansas and in New York and Wisconsin. Only a small quantity is cut in the Corn Belt, even in the area originally forested, doubtless because of the small amount of woodland remaining and the common use of coal. In the coal-mining districts and sparsely inhabited localities also relatively little firewood is cut.



BAE 31078

FIGURE 218.—Five billion board feet of sawlogs and veneer logs were cut on farms in 1929—about one-seventh of the total cut in that year. Two-thirds of this cut on farms was in the South, and the remainder mostly in New England, New York, Pennsylvania, Ohio, and the North Pacific States. Apparently few trees suitable for timber are left on farms in the Great Lakes States or in the Ozark area of Missouri and Arkansas, in southern Georgia and Florida, or in California.

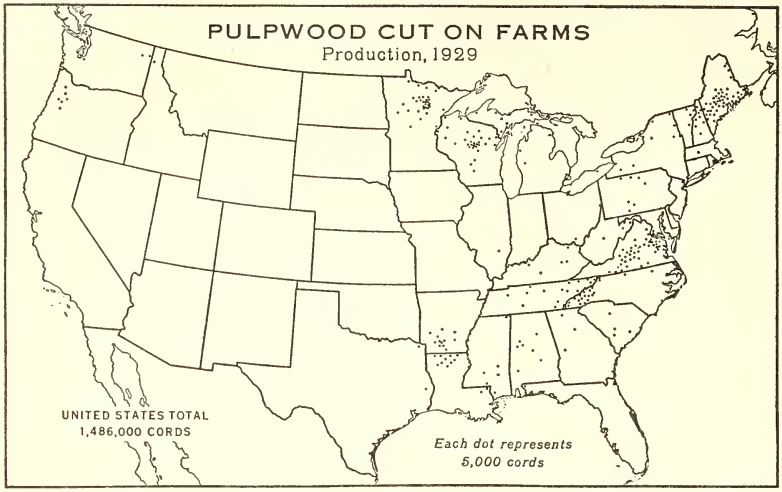


FIGURE 219.—The United States is a large consumer of pulpwood because of its enormous production of newspapers and magazines. It does not produce nearly enough pulpwood for its requirements. The chief areas of farm pulpwood production are (1) New England, especially Maine; (2) the Virginia-North Carolina-Tennessee area; (3) the Minnesota-Wisconsin area, and (4) a small area in Arkansas and adjacent Louisiana. Scattered areas are found in South Carolina, Georgia, Alabama, Mississippi, Oregon, and Washington. One-fourth of all pulpwood cut in 1929 was cut on farms.

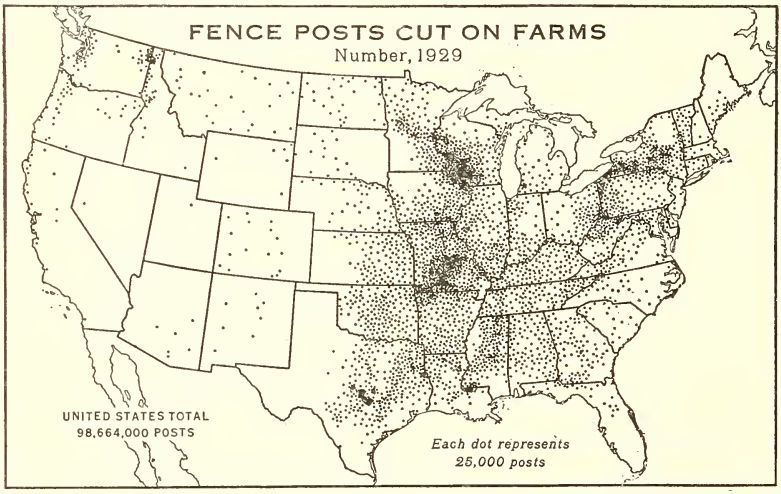


FIGURE 220.—The production of fence posts in 1929 was heaviest along the forest-prairie margin in Wisconsin and Minnesota, Missouri, Oklahoma, and Texas. This may be owing in part to the small size of many trees in this belt, and to the fact that oak and hickory are the common species. Many posts were cut in southern New York, and in the oak-chestnut belt extending from western Pennsylvania to northern Alabama and Louisiana. Relatively few posts were cut in the South Atlantic States.

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